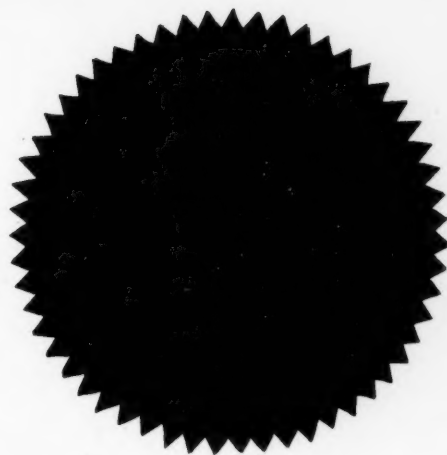


# The Journal

of the Michigan State Medical Society



Volume 53

February, 1954

Number 2



(See Page 201)

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# THE JOURNAL of the Michigan State Medical Society

VOLUME 53

FEBRUARY, 1954

NUMBER 2

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\*Deceased, November 30, 1953.

FEBRUARY, 1954

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# THE JOURNAL

## of the Michigan State Medical Society

VOLUME 53

FEBRUARY, 1954

NUMBER 2

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## MICHIGAN CLINICAL INSTITUTE March 10-11-12, 1954

"Welcome" will be the password at the 1954 Michigan Clinical Institute scheduled for the Sheraton-Cadillac Hotel, Detroit, Wednesday-Thursday-Friday, March 10-11-12.

"Glad You Are Here" will be the phrase that greets you as you arrive at the eighth annual Institute.

The successful "block system"—grouping those talks of one specialty or related specialties—again will be featured at the 1954 MCI. A copy of the program was mailed to all MSMS members about February 1.

Attend this very worthwhile Michigan Clinical Institute—we urge you to be in Detroit, March 10-11-12, where a fine medical banquet and plenty of "Welcome" will be presented to all doctors of medicine, with the compliments of the Michigan State Medical Society. Hotel reservations should be made *Now*.

## OUR GROUP HEALTH AND ACCIDENT INSURANCE PROGRAM

In activating the decision of the 1953 MSMS House of Delegates, the Executive Committee of The Council has authorized the following statement:

The immediate response to the group health and accident insurance program, approved by the 1953 Michigan State Medical Society House of Delegates and underwritten by the Provident Life and Accident Insurance Company, was most satisfactory.

All valid applications are now in force and several claims already have been paid by Provident.

A nationally known insurance consultant has the following to say about the group health and accident plan offered to the members of the Michigan State Medical Society: "I believe that the basis of rates charged by Provident are in keeping with sound actuarial principles and in my judgment the benefits promised by the proposed Provident plan are much more comprehensive."

All Michigan doctors of medicine here have an excellent opportunity to *increase* their protection against accident and sickness disability. Your MSMS Officers feel that your group health and accident insurance program, the first and only

group health and accident insurance plan endorsed by the Michigan State Medical Society, is one of the choice privileges of your State Society membership.

## HIGHLIGHTS OF EXECUTIVE COMMITTEE OF THE COUNCIL

### Meeting of November 18, 1953

Ninety-three items were presented to the Executive Committee of The Council on November 18. Chief in importance were:

- **Improvements in MSMS "home" at Lansing.** The new entryway and reception room are now complete; a parking lot for eight cars also has been installed on the Hillsdale Street side of the property.
- **Health and Accident Insurance program.** A digest of progress in this MSMS House of Delegates—approved program, being made available to all MSMS members by the Provident Life and Accident Insurance Company, was outlined. An advertisement in JMSMS by Provident was approved.
- **Activation of the periodic appraisal program,** developed by the Committee on Periodic Health Appraisal in collaboration with the MSMS Public Relations Committee, was given the "green light" by the Executive Committee of The Council.
- **Hospital standards and inspection.** The Michigan Health Commissioner's proposed rules and regulations re standards and inspection of hospitals coming within the purview of Act 227 of the Michigan Public Acts of 1953, were referred to the MSMS Hospital Relations Committee for study and report back to the Executive Committee.
- E. H. Berry, M.D., Flint, was appointed to the MSMS Hospital Relations Committee.
- **"Golden Goose" meeting throughout the state.** Report was given by the secretary on these meetings; their total will be well over 100 prior to March 10, 1954. The Executive Committee authorized Wm. S. Reveno, M.D., Detroit, Chairman of the Advisory Committee to Michigan Hospital Service, to prepare a study of the Committee's recent survey, for publication in JMSMS.

(Continued on Page 128)



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## HIGHLIGHTS OF THE COUNCIL

(Continued from Page 126)

Letters to all MSMS members and to chiefs of staffs of Michigan hospitals, re the subject of hospital utilization, were approved and authorized to be mailed.

A plaque, to be used in doctors' waiting rooms, as recommended by the Advisory Committee to MHS, also was approved.

A "Golden Goose Breakfast" was scheduled to be held during the Michigan Clinical Institute—specifically on Thursday, March 11, 1954, Sheraton-Cadillac Hotel, Detroit, during the Michigan Clinical Institute.

- **The monthly financial reports** and bills payable were studied and approved.
- **Committee reports**—The following reports were given consideration: (a) Committee on Scientific Work, meeting of November 4; (b) Emergency Medical Service Training Course, meeting of November 4; (c) Rheumatic Fever Control Committee, meeting of November 4; (d) Rural Medical Service Committee, meeting of November 5; (e) Advisory Committee to Michigan Hospital Service, meeting of November 11; (f) Michigan Cancer Co-ordinating Committee, meeting of November 12; and (g) Beaumont Memorial Committee, meeting of November 17.
- **Reports of the Chairman of The Council**, The President, the President-Elect, the Secretary, and the Editor, were presented and accepted. Progress report from the Public Relations Counsel was presented and approved.
- **H. A. Furlong, M.D.**, Pontiac, was appointed Chairman of the 1953-54 Basic Science Study Committee. Members are D. W. Thorup, M.D., Benton Harbor, and C. E. Umphrey, M.D., Detroit.
- **1953 MSMS House of Delegates resolution** re reporting of venereal disease was referred to a joint study committee composed of two representatives from each of the following groups: Michigan Health Officers Association, Michigan Pathological Society, MSMS Venereal Disease Control Committee, Michigan Department of Health, and the MSMS Council.
- **1954 Michigan Clinical Institute**: The secretary reported that a dinner in honor of John M. Sheldon, M.D., Ann Arbor, President of the American Academy of Allergy, was being planned by the Michigan Allergy Society, for Wednesday evening, March 10, 1954.
- **Michigan Rural Health Conference** invitation that MSMS be a co-sponsor of its 1954 Conference, scheduled for Saginaw, January 14-15, was accepted, with thanks.
- **Survey of MSMS members** to ascertain which M.D.'s in this state are contributing toward

the education of young men and women in the health professions (medical, nursing, pharmaceutical, dental, etc.) was authorized for inclusion in a Secretary's Letter to be mailed to all MSMS members.

- **1954 Annual Session.** (a) William S. Reveno, M.D., Detroit, was appointed General Chairman of Arrangements; (b) House of Delegates Press Relations Committee, J. E. Livesay, M.D., Flint, Chairman; K. H. Johnson, M.D., Lansing; L. Fernald Foster, M.D., Bay City; R. A. Johnson, M.D., Detroit, and C. L. Weston, M.D., Owosso; (c) Scientific Press Relations Committee, R. A. Johnson, M.D., Detroit, Chairman; H. F. Dibble, M.D., Detroit; J. G. Molner, M.D., Detroit; and E. F. Sladek, M.D., Traverse City.
- **Joint meeting with Michigan's Delegates** to the AMA House of Delegates (W. A. Hyland, M.D., W. D. Barrett, M.D., J. S. DeTar, M.D., W. H. Huron, M.D., R. A. Johnson, M.D., R. L. Novy, M.D., and G. C. Penberthy, M.D.): Eleven items were discussed and advice was offered on matters that may be considered at the AMA Clinical Session, St. Louis, Mo., December 1-4, 1953.
- **Four items of mutual interest** were discussed with State Health Commissioner A. E. Heustis, M.D.
- **The monthly report of Rheumatic Fever Co-ordinator Leon DeVel, M.D.**, Grand Rapids, was presented and accepted.

## THE BRICKER AMENDMENT

Apropos the Bricker Amendment mentioned on our editorial pages in this issue, we are making the following quotation from the Legislative Report Release of Congressman H. R. Gross of Ohio, January 6, 1954. Under present Supreme Court decisions, these treaties and International Documents have the effect of law, even if contravening the conditions of the Constitution and the laws of the states or nation.

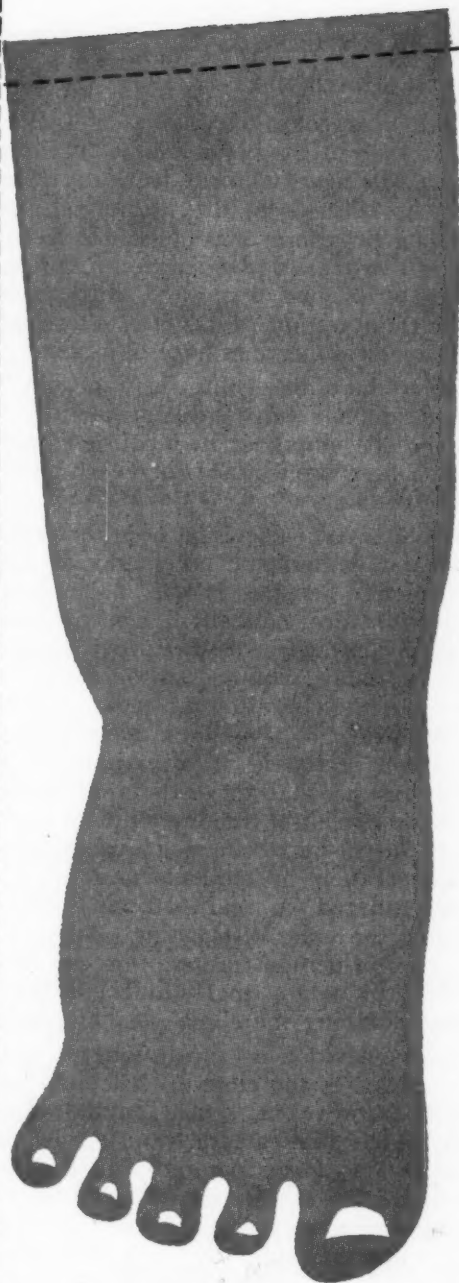
Since the end of World War II, more than 1,000 documents have been added to the State Department's file of Treaties and International Documents and additional thousands of international agreements, entered into since 1945, have not yet been published. The treaties and agreements that have been signed and published in this brief period represent almost half the total number of such documents previously made effective in the entire history of this republic, and many are as important as this nation ever signed.

What is the cost in assuming these obligations? No one really knows. In terms of dollars appropriated and spent and in terms of battle casualties we have some estimate of the cost, but many of these commitments and obligations are open-ended and we have learned by wretched experience that in such instances neither costs nor consequences can be foreseen!

Readers of these columns will recall that about six months ago I related in detail the story of action taken

(Continued on Page 30)

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FEBRUARY, 1954

Say you saw it in the Journal of the Michigan State Medical Society

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## THE BRICKER AMENDMENT

(Continued from Page 128)

in the United Nations through adoption of a resolution providing that any government so disposed could at any time nationalize any and all properties within its domain. This U. N. resolution simply proclaimed to the world that the government of any member nation could and would at any time seize private property for the use of the state.

Latest report of the Senate Committee on Reduction of Non-essential Federal Expenditures shows that there were still nearly 183,000 American civilians on the federal payrolls outside the continental United States. That figure doesn't include a single person in the military services.

It means, when families of these 183,000 are taken into account that the government is spending several hundred millions of dollars a year to transport and maintain this army of civilians all over the world.

## HARPER HOSPITAL REUNION

(During Michigan Clinical Institute)

On Wednesday, March 10, 1954, the Harper Hospital reunion will open with a reception at 6:30 p.m., to be followed by dinner at 7:30 and entertainment at 9:00 o'clock, all to be held in the Grand Ballroom, Sheraton-Cadillac Hotel, Detroit.

Dr. Dale P. Osborn of Cincinnati, Ohio, and Chief Cardiologist to the Good Samaritan Hospital, former assistant superintendent of Harper Hospital, and former intern and resident of the same hospital, is the chairman.

Great plans are on foot to make this reunion a pleasant and happy one. For detailed information, contact Lawrence Reynolds, M.D., Chief of Staff and Chairman, 10 Peterboro, Detroit, Michigan.

## "BLOCK SYSTEM"

What is the "Block System" used by MSMS at the Michigan Clinical Institute in March and at its Annual Session in September?

**Answer:** The successful "block system," inaugurated at the Michigan Clinical Institute of 1951—and used for the first time at the 1953 MSMS Annual Session, means the grouping of those talks of one specialty or related specialties.

**Example:** All surgical talks are grouped and presented on one morning or one afternoon, thus permitting those doctors of medicine primarily interested in surgery to attend one session or "block" and relieving them of the necessity of covering all three days of the meeting.

## "INDIANA DAY" PLANNED AT 1954 MCI

Indiana Day will be fittingly celebrated during the forthcoming Michigan Clinical Institute—on Thursday, March 11, 1954.

This date has been set aside as a special day honoring all M.D.'s from the Hoosier State who attend the Michigan Clinical Institute. The designation of Indiana Day, by the Michigan State Medical Society, has been approved by The Council of the Indiana State Medical Association.

All Michigan registrants at the MCI are urged to extend the hand of welcome to their medical neighbors from Indiana on Thursday, March 11—"Indiana Day."

## COLOR TV COMES TO 1954 MCI

Detroit, March 10-11-12, 1954

This year color television will make its initial appearance in the postgraduate teaching program of the Michigan Clinical Institute. The addition of color telecasts to the traditional postgraduate teaching programs of professional meetings began almost five years ago when Smith, Kline & French Laboratories first sponsored this service to the medical profession. Since then, telecasts at fifty-three medical meetings have been made.

Everywhere the color medium has been presented, doctors have acclaimed it as a "revolutionary" development in medical education, with far reaching significance for every medical school in the country.

Why has color television been received with such wide and enthusiastic acceptance by the medical profession? Because it met an urgent need of modern medical education, a need brought about, ironically enough, by the progress of medicine. Surgery today requires an operating team that surrounds the operating table. Consequently, most of the intricacies of an operative procedure are lost to viewers seated in an amphitheater, even those amphitheatres that are of the most modern design. Thus as a result of the development of the surgical team, the all-important teaching method of close-up observation by students and interested graduates suffered a real setback. The difficulty is much the same in teaching clinics. The details of a clinical demonstration often can be seen satisfactorily by only a small number of persons, a situation reducing the clinic's teaching effectiveness.

Color television is "revolutionary" in that it not only reinstates the close-up teaching method, but greatly improves it. Once having seen the ease with which the camera can televise items very small or very large in rapid sequence, a physician can appreciate what it means to students and other doctors when the eye of the camera brings them to within inches of operative and clinical procedures.

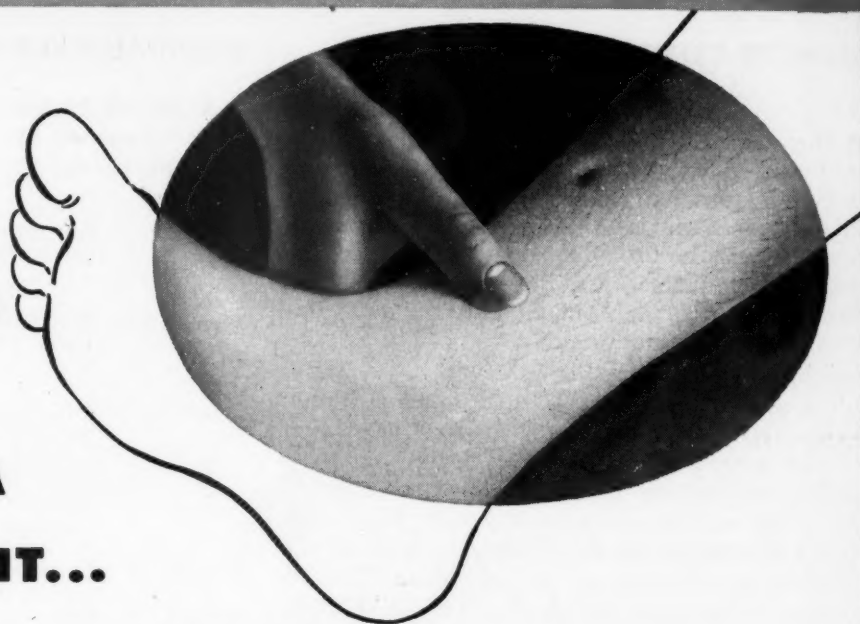
When the camera is focused on a surgical field, the audience's view is better than that available to some members of the operating team. At a recent medical meeting where eye operations were being televised, the eye as seen on the giant screens was approximately three feet high and four feet wide. While such a vivid picture would be no less than horrible to a lay audience, the almost unlimited possibilities for medical education implied in this same picture should be apparent to every physician.

The possibility of using color television for undergraduate medical instruction does not mean

(Continued on Page 132)

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EDEMA  
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By a dual action on the kidneys which both increases the volume of the glomerular filtrate and diminishes tubular resorption, Salyrgan-Theophylline rapidly produces copious diuresis.

The response to Salyrgan-Theophylline solution does not "wear out" so that doses may usually be repeated as required, without loss of efficiency.

With Salyrgan-Theophylline tablets taken orally, patients appreciate the gradual, non-flooding diuresis and the greater convenience. Salyrgan-Theophylline tablets "can successfully decrease the patient's burden... either by decreasing the need for frequent mercurial injections or by actually replacing the injections entirely."<sup>1</sup>



1. Abramson, Julius, Bresnick, Elliott, and Sapienza, P. L.:  
*New England Jour. Med.*,  
243:44, July 13, 1950.

*Winthrop-Stearns* INC.

NEW YORK 18, N.Y. WINDSOR, ONT.



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FEBRUARY, 1954

*Say you saw it in the Journal of the Michigan State Medical Society*

131

**COLOR TV COMES TO 1954 MCI***(Continued from Page 130)*

that the staffs of medical schools will have to be part actors, part TV technicians. It does mean that the greatest variety of pertinent clinical material and close-up views of "live" surgical procedures can easily be brought to vastly increased undergraduate audiences. Color television can be expected to count heavily in any future plans concerned with new techniques for medical education.

Smith, Kline and French Laboratories of Philadelphia as sponsors of this modern and highly effective type of postgraduate medical education are to be congratulated and commended on their tangible contribution to Medicine. A scroll of appreciation will be presented to Smith, Kline and French Laboratories by the Michigan State Medical Society on occasion of the Michigan Clinical Institute, Wednesday, March 10, 1954, in Detroit.

**PAYMENT OF 1950 AMA MEMBERSHIP DUES**

The AMA House of Delegates, in St. Louis, December 1-4, 1953, adopted the following resolution:

"RESOLVED, that any active member of the American Medical Association who failed to pay dues for the year 1950, and who was suspended for such delinquency, may be reinstated during the first six months of 1954 by payment of 1954 dues only.

Should such an individual fail to pay his 1954 dues by July 1, 1954, he shall continue to be considered delinquent."

**HIGH RETURN ON ANNUAL SESSION QUESTIONNAIRE**

Thanks are due a high percentage of the MSMS membership who executed and returned the questionnaire on MSMS Annual Sessions. The amazing total of 974 questionnaires have been received to date. Many fine suggestions for improving future Annual Sessions were included under "Remarks." The Council expressed its gratitude for this tangible evidence of co-operation and assistance. It will work all the harder to make the MSMS convention the best of its kind in the world.

**ANNUAL ENROLLMENT****For Doctors and Assistants****BLUE CROSS - BLUE SHIELD****MARCH 10 to APRIL 1****Watch for enrollment materials in your mail.****MEDICAL MEETINGS AND CLINIC DAYS**

A list of known medical meetings and clinic days, sponsored by county medical societies and other physicians' groups in Michigan, follows:

1954 March 9	American College of Surgeons, Michigan Chapter	Sheraton-Cadillac Hotel, Detroit
March 10-12	MICHIGAN CLINICAL INSTITUTE	Sheraton-Cadillac Hotel, Detroit
March 12	Fifth Annual Michigan Heart Day (During MCI)	Sheraton-Cadillac Hotel, Detroit
Spring	MSMS Postgraduate Extramural Courses	State-wide
April 14	Genesee County Medical Society 9th Annual Cancer Day	Flint
May 6	Ingham County Medical Society Clinic Day	Lansing
May 12	Annual Clinic Day and Alumni Reunion of Wayne University College of Medicine (testimonial to Michigan's Foremost Family Physician, Wm. J. Stapleton, Jr., M.D.)	Hotel Fort Shelby, Detroit
May 20	American College of Surgeons Annual Symposium on Trauma and Nutrition	Ann Arbor
June —	Bon Secours Hospital Annual Clinic Day	Detroit
June 18-19	Upper Peninsula Medical Society Annual Meeting	Menominee
June 21-25	AMA Annual Session	San Francisco
June —	Annual Collier - Penberthy Medical Surgical Conference	Traverse City
July 17	Beaumont Memorial Dedication	Mackinac Island
August 12	Fourth Annual Clinic, Central Michigan Committee, ACS Michigan Committee on Trauma, plus Michigan National Guard Medical Personnel, and Medical Society of North Central Counties	Grayling
September 29-30-October 1	MSMS ANNUAL SESSION	Detroit
Oct. 14-15	Michigan Cancer Conference	East Lansing
Autumn	MSMS Postgraduate Extramural Courses	State-wide



Additions to this list of meetings are invited by the Editor of JMSMS, in order to make this monthly announcement complete and accurate.

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especially valuable when allergic factor  
is suspected or present

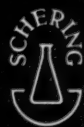
  
  
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Contains CHLOR-TRIMETON® Maleate  
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## Washington Letter

Although the budget, defense and farm policy are monopolizing Washington headlines, Congress is paying more than casual attention to the health and social security fields. In these, as in other legislative areas, it has for its guidance a specific program, laid down by President Eisenhower in his various messages during the first few weeks of the session. The question now is whether this closely-divided Congress will have the time and/or the inclination to follow through on everything the Administration wants.

Before Congress settled down to its task, the President met with a group of American Medical Association leaders, who discussed with him the Association's position on several important pieces of legislation. Present at the White House meeting, in addition to Mr. Eisenhower and Sherman Adams, Assistant to the President, were AMA President Edward J. McCormick, Trustees' Chairman Dwight H. Murray, President-Elect Walter B. Martin, and Washington Office Director Frank E. Wilson.

Congress got into the health and welfare field with no waste of time. Within five days after Congress reconvened the House Interstate and Foreign Commerce Committee, under the chairmanship of Rep. Charles Wolverton (R., N.J.), began an exhaustive series of hearings on voluntary health insurance, further evidence that the Administration is determined to get some action in this direction.

Chairman Wolverton as long as four years ago was interested in legislation to help pre-paid insurance programs extend their coverage and increase their benefits. In 1950 he incorporated his ideas in a bill, but it was not acted upon by the committee and was not revived until this year. Now the atmosphere is much more favorable for Mr. Wolverton's proposal. Not only is he chairman of the committee and his party in control of Congress, but his ideas have strong support from the Administration.

Basically the Wolverton idea is an FDIC for voluntary health insurance. In about the same way the Federal Deposit Insurance Corporation insures bank deposits up to a certain limit, the Wolverton program would insure (or re-insure) various types of hospital, surgical, and medical insurance programs. The proposal is for the federal government to set up a national health insurance underwriting corporation. To keep the corporation going, the member plans would contribute a certain percentage of their gross receipts, possibly 2 per cent.

With the national corporation underwriting unusual risks, the individual programs could offer catastrophic or "complete" coverage. By scaling individual premiums to the family income, the

member plans also could offer protection to families with very low incomes. The national corporation would pay possibly two-thirds of each subscriber's claim in excess of, say, \$500 or \$1,000 in any one year. (The Editor will analyze and comment on this measure in the March issue.)

Another piece of legislation, receiving favorable attention, also would help families with their medical expenses—a proposed liberalization of income tax deductions allowed for medical expenses. Under present law only that part of medical expense exceeding 5 per cent of taxable income may be deducted. The pending legislation would drop this to probably 3 per cent, and raise or eliminate the maximum limit. In past years scores of bills pointed in this direction have been introduced. If this is incorporated in the general tax overhaul legislation, it is believed to have a good chance of enactment.

Secretary Hobby's Department of Health, Education and Welfare is firmly behind a proposal to have the federal government show more leadership in vocational rehabilitation of the handicapped. At this writing it is too early for any good indication as to whether physicians will be brought under social security. The Administration's bill would blanket in most self-employed groups, including dentists, attorneys, architects and farmers, in addition to physicians. Rep. Carl Curtis (R., Neb.), chairman of the subcommittee which investigated social security, apparently feels the same way. However, a substantial number of the members of the House Ways and Means Committee, which must pass on the bill, are known to feel that compulsion should not be used on groups that do not want Old Age and Survivors Insurance.

From all indications available during the first few weeks of Congress, a showdown fight may be unavoidable on medical care for military dependents. Defense Department, with support from the President, wants dependent care extended and made uniform among the three services, with military physicians carrying as much of the responsibility as they can. Under the Defense Department plan, dependents who could not be taken care of at military installations would be allowed to obtain their care from private sources, with the government paying almost all of the cost.

The American Medical Association agrees with the Defense Department that all dependents should receive medical benefits as nearly uniform as possible. However, AMA contends that wherever possible dependents should use private physicians and private hospitals, and that the military personnel and facilities should be employed only where civilian facilities are inadequate.



## Which filter-tip cigarette is the most effective?

In continuing and repeated impartial scientific tests, smoke from the new KENT consistently proves to have much less nicotine and tar than smoke from any other filter cigarette—old or new.

The reason is KENT's exclusive Micronite Filter.

This new filter is made of a filtering material so efficient it has been used to purify the air in atomic energy plants of microscopic impurities.

Adapted for use as a cigarette filter,

it removes nicotine and tar particles as small as 2/10 of a micron.

And yet KENT's Micronite Filter, which removes a greater percentage of nicotine and tar than any other filter cigarette, lets through the full flavor of KENT's fine tobaccos.

Because so much evidence indicates KENT is the most effective filter-tip cigarette, shouldn't it be the choice of those who want the minimum of nicotine and tar in their cigarette smoke?

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# Editorial Comment

## ON PLUCKING A GOOSE

The effectiveness of Voluntary Health Insurance Programs in this country is seriously threatened. The threat to these plans stems from rising insurance costs due in part to the increased cost of hospital operation but principally to abuses and exploitation by insurance salesmen, patients, doctors, and hospitals.

With rising costs of operation, premiums must be increased; with increased premiums, buyer resistance increases; and there is danger of pricing this type of insurance out of reach of the very families who need it most.

If the voluntary health insurance plans fail, the government will surely step in with a compulsory plan involving regimentation of all concerned. But the voluntary plans need not fail; they need not fail if abuse and exploitation of them is curbed.

The extent of misuse of Blue Cross Insurance is revealed in a yet unpublished survey supervised by the Blue Cross Advisory Committee of the Michigan State Medical Society. Data tabulated from 12,102 completed charts studied in 25 Michigan hospitals (including 5 from Wayne County) were subjected to statistical analyses. When Blue Cross, commercial insurance companies, or the government paid the patient's bill, 33 per cent of hospital usage was classified as improper compared to 14 per cent when patients paid their own bills. According to the survey, almost 20 per cent of the Blue Cross insurance dollar is spent on unnecessary hospitalization.

The doctor who controls admission, treatment, and discharge of the hospital patient is in a key position to control abuses and exploitation of the voluntary health plans but he needs the help of the insurance companies, his patients, and the hospitals.

Blue Cross can help by more careful sales promotion. It can insist that its agents do not imply coverage not included in the policy. It would do well to give each subscriber a card welcoming him as a shareholder in this non-profit plan, but clearly stating that he cannot be admitted to a hospital for diagnosis only, that he cannot stay an extra day or two for the convenience of himself or his family, and that he cannot use his policy for nursing care in a hospital. If admissions of diagnostic workup continue, issuance of policies with deductible clauses similar to those designed for automobile collision insurance would simplify the physician's handling of unreasonable or over-sold patients with Blue Cross coverage.

Hospitals can help by scheduling admissions earlier in the day, by eliminating delays due to bottlenecks in the ancillary services, delays in re-

porting tests, delays in notification of discharges, and by not winking at excessive amounts of expensive medicines released from the pharmacy at Blue Cross expense. Hospitals must not encourage patient overstays to keep the daily census high.

The patient can help by not demanding hospitalization for diagnostic procedures or special treatments such as x-ray or physiotherapy, and by not insisting on staying extra days because it is inconvenient to go home. But the patient as a shareholder must be apprised of the purposes and fair usages of Blue Cross not only by the doctor but by Blue Cross itself.

The physician himself must avoid admitting well patients for diagnostic or therapeutic convenience, must avoid prolonged preoperative treatment, must avoid permitting overstays for the convenience of patient, doctor, or hospital, and must avoid overusage of medications, and unnecessary laboratory tests. The physician more than anyone else is in a position to keep down the costs of unnecessary hospitalization.

Let us not permit the Blue Cross goose to be plucked by exploitation—the Blue Cross goose whose golden eggs have saved not only our private hospitals from insolvency but many a patient with catastrophic illness as well. Let us remember that every fraudulent claim for voluntary health insurance represents a contribution to the war chest of Socialism.—MILTON R. WEED, M.D., *Detroit Medical News*, December 21, 1953.

## HOW ABOUT THE PEOPLE?

Among the obligations of citizenship is included the privilege of bearing arms in the defense of the nation. Those who have served the needs of the country in this manner are called veterans. There are three classes of veterans: those who gave the most they had to give—their lives—for all of us; those who sustained physical or mental damage as the result of this military service, and finally those who emerged from their period of service without physical or mental disease relatable to the bearing of arms.

There is nothing that the nation can do to replace the lives lost in its defense—except to pray that such losses have not been futile. Wisely and sympathetically it has offered everything it has to aid and rehabilitate the veteran whose disability is connected with his military life. But it has opened the door so widely to the veteran who finished his hitch without injury or defect that the Veterans' Administration, with 130,000 hospital

(Continued on Page 140)

se a drug of choice

# Erythrocin

TRADE MARK

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**HIGHLY-ACTIVE ERYTHROCIN** is also effective against streptococci and pneumococci. Less likely to alter normal intestinal flora than most other oral antibiotics. Gastrointestinal disturbances rare, with no serious side effects reported.

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1. Grigsby, M. E., et al., *Antibiot. & Chemother.*, 10:1029, October, 1953.

SO FOR CHILDREN: Tasty, Stable Pediatric ERYTHROCIN Suspension

## HOW ABOUT THE PEOPLE?

(Continued from Page 136)

beds now in operation, constructed with lavish disregard for cost and in direct competition with the nonveteran civilian for the essential technical hands which manage hospitals, has become a colossus with an insatiable appetite for the federal budget.

The problem has become so complex that the bureaucracy of the Veterans' Administration has lost sight of its primary function—to provide what is necessary to sustain and rehabilitate the veteran whose disability is service connected; every other function it has assumed in the past twenty years has little but political odor to it. It spent \$17,000,000,000 on what was called vocational rehabilitation for the veteran of World War II—and his included courses in social dancing and the subsidy of fly-by-night academies. It has filled its 130,000 hospital beds with what is generally an 85% non-service connected populace, and blessed this with the sanctity of "training programs."

And then, as an ultimate demonstration of deep-grained ineptness, it ordered the veteran with a service-connected defect to leave the sympathetic care of his personal physician and join the

line at the Veterans' Administration Clinic. The purpose of this is stated to be an economy. Everyone, including thoughtful relicts in Washington, know that this is ridiculous! VA cannot provide service in its clinics at three dollars a visit, which is what doctors in Michigan are receiving in Michigan's Home Town Care Program for Veterans. This state, with a smaller number of service-connected veterans than neighboring Illinois, provides more care for more veterans at less budgetary cost than is available at the behemoth clinic at Hines, Illinois. So the reason for reduction in the Home Town Care Program is a lie, simply a lie, and if our legislative representatives cannot clean up this muddle, we shall have to have new legislators.

Curiously, this ruling places the service-connected veteran at a disadvantage, which is certainly not the intent of the American people. If the Veterans' Administration honestly wants to effect economy, it can take the foot out of the door and stop the flow of non-service connected veterans (whom it has made into a special kind of citizen) into the fancy hospital beds and the special services which are denied every other tax-paying member of the nation.—WILLIAM BROMME in *Detroit Medical News*, October 19, 1953.

## M.D. Registrations at Michigan's Medical Meetings

### MICHIGAN STATE MEDICAL SOCIETY

Grand Rapids—September 23-25, 1953

*Michigan Physicians Outside Wayne County* (1,310): Anesthesiology, 24; Dermatology-Syphilology, 12; Gastroenterology-Proctology, 14; General Practice, 429; Medicine, 108; Nervous and Mental Diseases, 38; Obstetrics-Gynecology, 56; Ophthalmology, 39; Otolaryngology, 24; Pathology, 17; Pediatrics, 57; Public Health, 23; Radiology, 22; Surgery, 192; Urology, 19; Residents and Interns, 138; No specialty given, 98.

*Wayne County Physicians* (289): Anesthesiology, 4; Dermatology-Syphilology, 1; Gastroenterology-Proctology, 12; General Practice, 72; Medicine, 28; Nervous and Mental Diseases, 14; Obstetrics-Gynecology, 8; Ophthalmology, 9; Otolaryngology, 5; Pathology, 13; Pediatrics, 15; Public Health, 2; Radiology, 4; Surgery, 57; Urology, 9; Residents and Interns, 23; No specialty given, 13.

*Physicians from Outside Michigan* (62): Arkansas, 1; California, 3; Colorado, 1; District of Columbia, 2; Florida, 2; Illinois, 8; Indiana, 6; Maryland, 3; Massachusetts, 2; Minnesota, 4; Missouri, 1; Nebraska, 1; New York, 1; North Carolina, 1; Ohio, 10; Oregon, 1; Pennsylvania, 3; Rhode Island, 2; South Carolina, 1; South

Dakota, 1; Utah, 1; Virginia, 1; Wisconsin, 3; Canada, 2; West Pakistan, 1.

### MICHIGAN CLINICAL INSTITUTE

Detroit—March 11-13, 1953

*Michigan Physicians Outside Wayne County* (434): Anesthesiology, 7; Dermatology-Syphilology, 2; Gastroenterology-Proctology, 10; General Practice, 157; Medicine, 45; Nervous and Mental Diseases, 4; Obstetrics-Gynecology, 21; Ophthalmology, 6; Otolaryngology, 5; Pathology, 6; Pediatrics, 13; Public Health, 21; Radiology, 8; Surgery, 56; Urology, 5; Residents and Interns, 33; No specialty given, 35.

*Wayne County Physicians* (773): Anesthesiology, 17; Dermatology-Syphilology, 4; Gastroenterology-Proctology, 7; General Practice, 234; Medicine, 129; Nervous and Mental Diseases, 3; Obstetrics-Gynecology, 69; Ophthalmology, 18; Otolaryngology, 7; Pathology, 8; Pediatrics, 23; Public Health, 7; Radiology, 9; Surgery, 138; Urology, 9; Residents and Interns, 65; No specialty given, 46.

*Physicians from Outside Michigan* (68): Indiana, 4; Missouri, 1; North Dakota, 1; Ohio, 17; Pennsylvania, 1; Wisconsin, 1; Ontario, 43.

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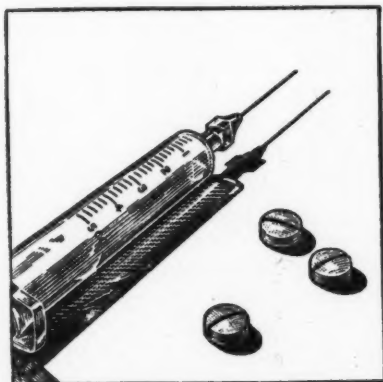
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# Cancer Comment

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## EDUCATION MOST IMPORTANT CANCER CONTROL MEASURE

People should realize that constructive results do not flow merely from organization of a program. That is but the beginning of any accomplishment, educational or otherwise. It is the pattern to be followed in reaching the desired objective.

Today, too much reliance and emphasis is placed on the organization aspects of the cancer problem and not enough on the personal contact for education. One telling will not do the job. It must be repeated over and over. This is well illustrated by the true incident of the woman's club that had a talk on cancer and when the program chairman was approached two years later about another talk, she said: "We know all about cancer; we had a speaker two years ago who told us all about it, so what is the use of another talk on the same subject."

In the public school system of this country, the educational responsibilities are not discharged by "one talk" on any subject. Were that a fact, education would be a simple matter. Instead, years of school attendance and study are required, and of late years, adult education review programs are offered in many public school systems.

Education—general or health—is a never-ending process. Knowledge is not static and education cannot be static. The individual or group that "knows it all" about any subject only reveals ignorance which is concealed beneath a blustering exterior.

Likewise, the rendering of increased service to a few individuals in the community to meet their needs cannot compensate for the lack of education for all. At this time, there seems to be an increasing emphasis on service of all kinds to cancer patients, most of whom are incurable, rather than placing emphasis on education to prevent cancer, or, once acquired, its development to the advanced and incurable stage. Service will do little to control or lessen the incidence of cancer; education is the only known method of accomplishing this desirable end.

It would be as reasonable—and unreasonable—to assume that the present public educational system could be abandoned, permitting the rank and file of the population to grow up as illiterates with a few educated people in each community to supply the literate needs of the area through the munificence of some organization, as to expect the cancer problem to be solved by supplying unlimited services to the incurable cancer patient. Of course, service can be dramatized so as to arouse the sympathies of those with means for

supporting such activities. It also gives opportunity for publicity for the giver or organizations acting as the service medium.

On the other hand, education is not dramatic; it is not emotion-arousing as is service. When it reaches into the emotional realm, it becomes propaganda rather than education. Its effectiveness is based on precept as well as example set by the educator. Success depends on optimism of belief in the efficacy of the educational method, persistence in repetition of principles and facts, and the stimulation of the individual to "carry on" in his educational experience in order to keep abreast of new information as it becomes available.

If education of the layman has been effective, he will have learned not to accept every public announcement about new information on cancer causes and cures until they have been evaluated by well known methods and accepted by responsible scientific groups. Every worker in the field of cancer research has the laudable and aspiring ambition to be the discoverer of the cause or cure of cancer, thereby assuring himself of enduring fame. However, the investigator who rushes into publicity after one favorable result from an experiment which proved his point 100 per cent would do well to wait for the second result; if this is unfavorable, his success drops 50 per cent.

Many of these fragmentary and inconclusive reports are stimulated by organizations to show the marvelous returns on their financial support of the research and to arouse their contributors to more generous future assistance.

The tragedy of these premature public announcements is that many cancer sufferers and their friends accept them as being of practical application. Their hopes are buoyed beyond all reason and their disappointment when they find nothing of practical value is bitterly tragic to behold. Such pronouncements and reports have no public educational value; they are but cruel propaganda and render a distinct disservice to the cause of cancer education and control by raising questions in the public mind as to the authenticity and worthwhileness of any and all educational efforts in that field.

\* \* \*

Many polyps of the colon show malignant changes when examined histologically no matter how benign they may appear grossly.

\* \* \*

About 5 per cent of all patients with chronic idiopathic ulcerative colitis develop cancer of the colon.

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ACHROMYCIN, a new broad-spectrum antibiotic developed by the Lederle research team, has demonstrated greater effectiveness in clinical trials with the advantages of more rapid absorption, quicker diffusion in tissue and body fluids, and increased stability resulting in prolonged high blood levels.

ACHROMYCIN exhibits a broad range

of activity against beta hemolytic streptococcal infections, *E. coli* infections (including urinary tract infections, peritonitis, abscesses), meningococcal, staphylococcal, pneumococcal and gonococcal infections, otitis media and mastoiditis, acute bronchitis and bronchiolitis, and certain mixed infections.

ACHROMYCIN is now available in 250 mg., 100 mg., and 50 mg. capsules, SPERSOIDS® 50 mg. per teaspoonful (3.0 Gm.), Intravenous 500 mg., 250 mg. and 100 mg. Other dose forms will become available as rapidly as research permits.



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# MYCIN

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# PR REPORT

**COUNTY MEDICAL SOCIETY** public relations programs in the past have sometimes been rather difficult to pin down. The possibilities were diverse, but the over-all program has been introduced piecemeal over several years.

No longer is this the case. At the Annual County Secretaries and PR Conference, January 31, in Detroit, C. Allen Payne, M.D., MSMS PR Committee Chairman, laid out a PR program for county medical societies, in co-operation with MSMS, that was crystal-clear. Distributed with his talk was the new PR handbook, listing some twenty-six PR projects, most of them already under way in some form or another among Michigan's county medical societies.

PR for 1954—and beyond—was given a big boost. At the fingertips of each county medical society PR chairman and officers is a printed guide, outlining PR activity in three major categories, detailing the purpose of each project, and giving each local society the foundation for a well-rounded program.

**NO COUNTY IS EXPECTED** to carry out all twenty-six projects, Dr. Payne explained. Some are designed primarily for large counties, some for less-populous areas. But for adequate PR effort, each county society should be operating one or more projects in each of the three major divisions: (1) Improvement of Medical Services; (2) Education of the Public in Respect to Health and Medical Practice; (3) Organization for Action to Maintain Medical Freedom.

Major emphasis of MSMS PR activity in 1954 is to be directed towards service to county medical societies. This follows since some of the most important phases of PR for the entire medical profession, to be successful, must be carried out in the local community with the active interest of the individual doctor of medicine.

Here is the list of PR projects designed for county medical societies in 1954, as outlined in the new PR handbook:

## I. IMPROVEMENT OF MEDICAL SERVICES

1. The Business Side of Medical Practice
2. 24-Hour Medical Service
3. Blue Cross-Blue Shield Relationship with the Medical Profession
4. M.D. Procurement and Placement
5. Medical Student Procurement and Medical Scholarships
6. The Recruitment of Medical Associates
7. A Family Doctor For Every Family
8. The Establishment of Health Centers
9. The Building and Expansion of Hospitals
10. The Administration, Reporting and Referral of Indigent County, State and Federal Patients
11. Providing Means to Maintain Highest Standards in the Administration of Medical Practices

## II. EDUCATION OF THE PUBLIC IN RESPECT TO MEDICAL PRACTICE AND HEALTH

12. Develop and Maintain a Mutual and Friendly Understanding Between the Press and the Medical Profession
13. Use of Pamphlets
14. Effective Use of Radio and TV by the Medical Profession
15. Medical Forums
16. Adult Education Programs
17. Use of Motion Pictures for the Public
18. The Annual Physical Check-Up

## III. ORGANIZATION FOR ACTION TO MAINTAIN MEDICAL FREEDOM

19. Indoctrination of Medical Students, Interns, Residents and New Members
20. Strengthening Medical Societies
21. Co-operation with other Voluntary Organizations
22. Co-operation with Government Agencies
23. MSMS Handbook
24. Co-operation with Professions and Vocations Whose Science or Work Borders Upon Medical Science and Medical Practice.
25. Increasing the PR Value of the Woman's Auxiliaries and the Medical Assistant Societies
26. A Legislative Relations Program

## FEDERAL GOVERNMENT STATISTICS

During the twelve-month period ending October 31, civilian employment in the federal government was reduced by 196,941, bringing the total down to 2,371,113. The reduction in October, 1953, alone was 28,697. Reductions in federal employment thus far this fiscal year—since July 1, 1953—totalled 96,527.

The task of weeding out security risks in federal agencies continues. The Veterans Administration announced on December 2 that 134 of its employees have been separated from their jobs as security risks during the first six months of President Eisenhower's employee security program.

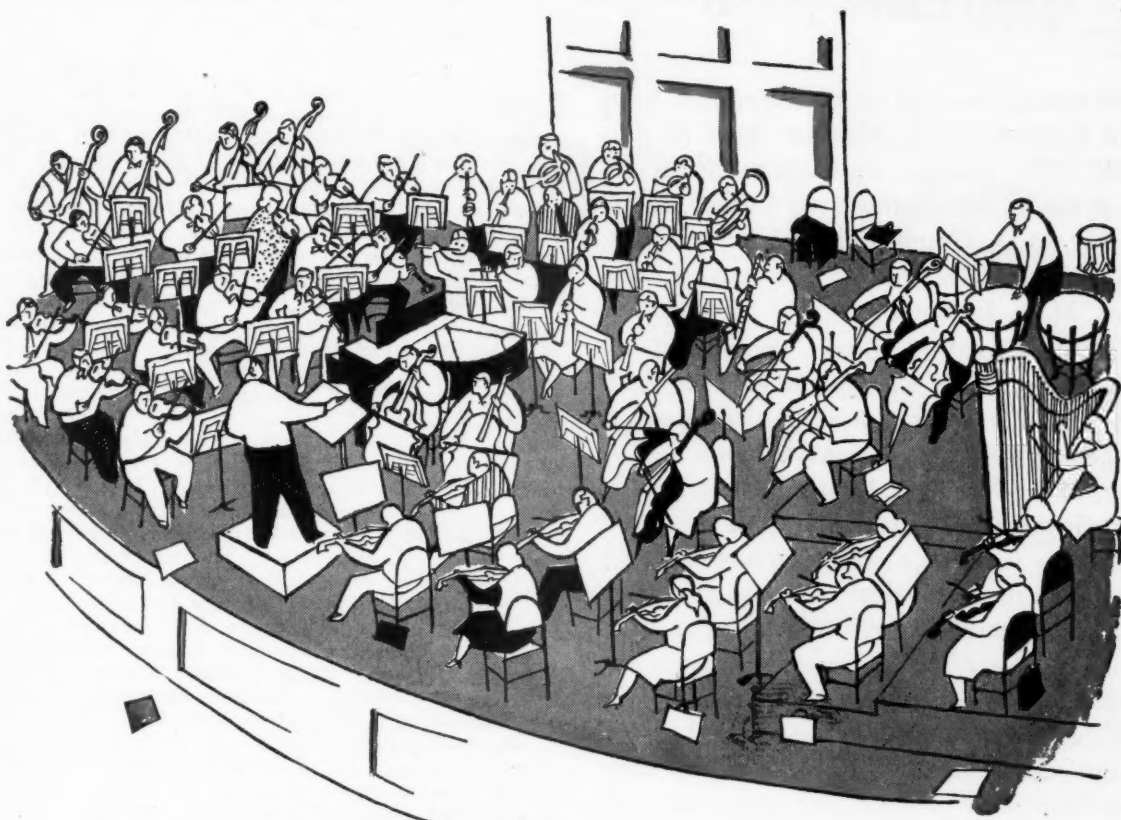
\* \* \*

U. S. Chamber of Commerce compilations show that there are 116,743 units of government in the United States today. These include the federal government, governments of the forty-eight states, 3,049 counties, 16,778 municipalities, 17,202 townships, 67,346 school districts, and 12,319 special districts of various types.

These figures tell only part of the story. At the federal level alone, there are 2,117 distinct segments of government. Keeping government under control, even in terms of numbers of agencies, is going to be a continuing struggle.

—From Congressman Paul Shafer *News Letter*

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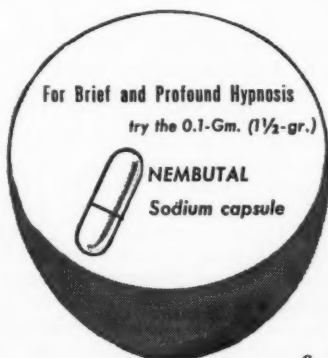
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FEBRUARY, 1954

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147

# Michigan Registrations in Medicine

The bi-annual meeting of the Michigan State Board of Registration in Medicine held on October 13, 1953, resulted in the unanimous reelection of the following officers: President, Elmer W. Schnoor, M.D., Grand Rapids; Vice President, E. C. Swanson, M.D., Vassar; Secretary, J. Earl McIntyre, M.D., Lansing.

Sergeant Raymond M. Sweet, recently of the Michigan State Police, was appointed Investigating and Law Enforcing Officer of the Board as of October 1, 1953, to succeed Captain LeRoy A. Potter, of the Michigan Department of Health, who has efficiently and faithfully served the Board for twenty-five years on a part-time basis through the courtesy of the State Health Department. Until the past few years, he received no extra compensation or salary for his services because the Legislature would not grant the necessary monies in the budget. Captain Potter has suffered several severe and serious illnesses during the past three years and has now reached the mandatory age of retirement. The Captain was made an honorary life member of the Michigan State Medical Society last year, and his many friends wish him a long comfortable life to enjoy it.

Members of the medical profession who wish to file complaints against any person or persons for practicing medicine without a license or any other violation of Act 237, Public Acts of 1899, as amended, the Medical Practice Laws of Michigan must make a typewritten and signed complaint containing the names and addresses of all people concerned which must be mailed to the Michigan State Board of Registration in Medicine, 201-2-3-4 Hollister Building, Lansing, Michigan.

The following names include those doctors of medicine, and their schools, who were registered and licensed by examination, special qualifying examination or endorsement up to October 28, 1953, beginning with number 20,276 and ending with number 20,563.

*By Endorsement.*—Alvin Seligson (*University of Arkansas*), John Stewart Wisely (*McGill*) (*New York*), Cornell Greava, Jr., (*Evangelists*) (*National Board Special Examination*), Valdo Andrew Getting (*Harvard*), Alfred Hamady (*University of New York*) (*National Board and Special Examination*), John A. Strouble (*Indiana University*) (*Indiana*), Keith Stuart Wemmer (*Ohio State University*) (*Ohio*), Robert A. Slabaugh (*University of Nebraska*), Phillip James Moore (*University of Illinois*), Frank L. Pettinga (*Boston*) (*National Board and Special Examination*), Richard John Schilling (*Indiana University*) (*Indiana*), Kazuko Bill (*Washington Woman's Medical College of Pennsylvania*) (*Pennsylvania*) (*Special Examination*), Robert Jewett Fry (*Temple*) (*National Board and Special Examination*), John Sutphin Tytus (*Ohio State University*) (*Ohio*), James Kaler, Jr. (*Indiana University*) (*Indiana*), John Alvord Churchill (*University of Pennsylvania*) (*Pennsylvania*), Thomas Wm. Kavanagh (*University of St. Louis*) (*Missouri*), Robert George App (*University of Indiana*) (*Indiana*), John Hinkle Tuzadre (*Duke*) (*Pennsylvania*), Neal Caldwell Brady (*George Washington*) (*National Board and Special Examination*), Harry Jockary Mellins (*University of New York*) (*Pennsylvania*), John Lewis Doyle (*University of Louisville*) (*Kentucky*), Edward J. Salmeri (*University of New York*) (*New York*), Melvin Lawrence Selzer (*Tulane*) (*Tulane*), John F. Wiltberger (*Ohio State University*) (*Ohio*), George Bernard Loan (*Georgetown*) (*National Board and Special Examination*), Thomas Warrall Watkins (*Jefferson*) (*New Jersey*), Wm. Albert Yancey (*University of Louisiana*) (*Louisiana*), Richard Leo Novak (*St. Louis University*) (*Missouri*), Julian Ray Youmans (*Emory*) (*Georgia*), Lawrence Sevallin Lackey (*University of Kansas*) (*Kansas*), Harry LeRoy Munson (*University of Virginia*) (*Virginia*), Burdette M. Berens (*University of Iowa*) (*Iowa*), Robert Eugene Birk (*University of Rochester*) (*National Board and Special Examination*), Frank S. Damazo, Jr. (*Evangelists*) (*National Board and Special Examination*), Richard Ben Moore (*University of Indiana*) (*Indiana*), Stanis S. Melendez (*Howard*) (*Illinois*), John T. Rogers (*Cornell*) (*Kentucky*), James Wm. McManus (*Georgetown*) (*Maryland*), Herbert M. Hiller (*Columbia*) (*National Board and Special Examination*), John M. Wood (*University of Vermont*) (*Vermont*), Carroll L. Jensen (*Evangelists*) (*California*), Joseph E. Cooper (*Temple*) (*North Carolina*), David K. Peshka (*Evangelists*) (*California*), Charles R. Donley (*University of Ohio*) (*Ohio*), Henry Wm. Post (*Tulane*) (*Louisiana*), Jack S. Guyton (*Howard*) (*Maryland*), Gustave G. Prinsell (*Columbia*) (*National Board and Special Examination*), Wm. W. Kimbrough (*Michigan University*) (*Ohio*), James H. Millard (*University of Cincinnati*) (*Ohio*), Leonard L. DeLella (*University of Georgetown*) (*National Board and Special Examination*), Clarence B. Kimbrough (*Meharry*) (*Kentucky*), Paul E. Ruble (*Vanderbilt*) (*Tennessee*), John W. Wolfe (*University of Tennessee*) (*Ohio*), Dale LeRoy Kessler (*University of Cincinnati*) (*Ohio*), James V. Fentress (*Vanderbilt*) (*Tennessee*), Ruth M. Ellis (*University of Boston*) (*National Board and Special Examination*), Charles W. Dunn (*Stritch*) (*Illinois*), Edward C. Nash (*University of Vermont*) (*National Board and Special Examination*), Joseph M. Garland (*Yale*) (*National Board and Special Examination*), Raymond J. Winfield (*University of Washington*) (*National Board and Special Examination*), Charles Wm. Bush, Jr. (*University of Boston*) (*Special Examination and National Board*), Wm. F. Kessler (*Jefferson*) (*New York*), Raymond J. Echt (*University of Illinois*) (*Illinois*), Clinton A. Jackson (*Meharry*) (*Tennessee*), Woodrow H. Pickering (*George Washington*) (*National Board and Special Examination*), Warren G. Stamp (*University of Iowa*) (*Iowa*), Raymond F. Guese (*Creighton*) (*Iowa*), Peter P. Brue (*Georgetown*) (*District of Columbia*), Erwin G. Pear (*Southwestern*) (*Texas*), Richard A. Steinbach (*University of Georgia*) (*Georgia*), Andrew Bedo (*University of Boston*) (*National Board and Special Examination*), Keith McElroy (*University of Toronto*) (*Special Examination and National Board*), Carl A. Galardi (*Yale*) (*National Board and Special Examination*),

(Continued on Page 150)

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## Bone Changes in Leukemia

By Philip W. Dorsey, M.D.

Flint, Michigan

LEUKEMIA, for practical purposes, may be considered a form of cancer of the hemopoietic organs. The disease affects primarily the lymphatic and reticulo-endothelial systems and consequently the bone marrow, resulting in a disorderly overproduction of leukocytes. It may be manifest by an increase in the number of leukocytes in the circulating blood, but occasionally it is accompanied by a normal or subnormal blood picture. Leukocytosis with or without the presence of young forms, however, is not pathognomonic of leukemia. It can be due to various causes such as infection (leukemoid reaction) or to circulating tumor cells (leukosarcoma).

The most important microscopic changes are found in the bone marrow. In lymphatic leukemia there is a homogeneous replacement by the lymphoid elements. In the myelogenous types the bone marrow shows an increase in the myeloid elements with numerous eosinophilic myelocytes and a shift to younger forms with a striking decrease in the percentage of nucleated red cells. Proliferation by way of the Haversian canals may extend to and lift the periosteum. Because of these infiltrative changes, pressure atrophy and rarefaction of the trabeculae with subsequent destruction of the cortex can occur.

The diagnosis of leukemia is relatively easy when the characteristic clinical picture is present. The manifestations of the disease, however, are frequently atypical and may present considerable difficulty, particularly in the aleukemic form. Roent-

gen examination of the skeleton, in addition to the clinical and laboratory findings, may be helpful in arriving at the correct diagnosis.

A review of 249 case histories of leukemic patients was compiled by the author in an attempt to correlate the clinical features of the disease with the roentgen changes occurring in the skeleton. It was the intent of this survey to determine what the changes were, as well as the percentage of patients showing them. One hundred and thirty-two of these fell into the lymphatic group, 114 in the myeloid group, and three in the monocytic group. Of this number, seventy-two patients (29 per cent) had a complete or partial skeletal survey. It is apparent, therefore, that it would be statistically incorrect to correlate the number of patients showing bone involvement with the total number seen. Likewise, comparing the number of patients shown to have bone involvement with those adequately radiographed would not give a correct incidence because this would represent a select group, that is, it would be made up of those in which bone involvement was suspected clinically.

### Incidence (Table I)

Table I shows that 30 per cent of the patients with lymphatic leukemia who were studied with radiograms demonstrated bone changes when adequately studied. The incidence was found to be highest in the aleukemic group which showed five cases with bone involvement in five cases studied.

Four of the remaining eight cases were of the acute and subacute type. In Craver and Copeland's similar series published in 1935, an incidence of 7 per cent was reported.<sup>2</sup> However, there is fairly close correlation when the twelve positive cases are compared with the total number of lymphatic leukemia patients; the percentage drops to 9 per cent.

## BONE CHANGES IN LEUKEMIA—DORSEY

TABLE I

	Total Cases	Adequate Bone Survey Negative	Chest Only	Adequate Bone Survey Positive	Positive Cases vs. Cases c Adequate Study	Sex Positive Cases	Average Age Positive Cases in Years	Length of Life After Bone Changes in Months
Acute and sub-acute lymphatic leukemia	34	8	22	4	4/12 33%	2 m 2 f	3.4	2.5
Chronic lymphatic leukemia	89	19	67	3	3/22 14%	3 m 0 f	48.3	7.0
Aleukemic lymphatic leukemia	9	0	4	5	5/5 100%	5 m 0 f	6.1	2.5
Total	132	27	93	12	12/39 30%	10 m 2 f		
Acute and sub-acute myelogenous leukemia	43	9	34	0	0	0 m 0 f	0	0
Chronic myelogenous leukemia	69	22	46	1	1/23 4%	0 m 1 f	45	1
Aleukemic myelogenous leukemia	2	0	1	1	1/1 100%	0 m 1 f	20	1
Total	114	31	81	2	2/33 6%	0 m 2 f		
Acute monocytic leukemia	3	0	3	0	0	0		
Sum Total	249	58	177	14	14/72 20%	10 m 4 f		

TABLE II

A—Number studied with radiograms B—Number showing changes

	Positive Cases																					
	Skull		Verte- brae		Humeri		Ulna		Radius		Pelvis		Femur		Tibia		Fibula		Flat Bones		Short Bones	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
Acute and subacute lymphatic leukemia	2	1	2	0	4	3	3	3	3	3	2	1	4	3	3	2	3	2	4	2	3	3
Chronic lymphatic leukemia	0	0	3	1	1	1	0	0	0	0	4	3	3	3	1	0	1	0	2	1	0	0
Aleukemic lymphatic leukemia	3	1	4	1	5	4	3	3	3	3	5	1	5	4	5	4	5	3	5	2	1	1
Total	5	2	9	2	10	8	6	6	6	6	11	5	12	10	9	6	9	5	11	5	4	4
Acute and subacute myelogenous leukemia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chronic myelogenous leukemia	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0
Aleukemic myelogenous leukemia	0	0	1	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	1	0	0	0
Total	0	0	1	0	0	0	0	0	0	0	1	1	2	2	1	1	1	1	2	0	0	0
Acute monocytic leukemia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sum Total	5	2	10	2	10	8	6	6	6	6	12	6	14	12	10	7	10	6	13	5	4	4

Bone changes in the myeloid group were present in 6 per cent of the adequately studied patients, and 1.8 per cent of the total number of leukemic patients. Craver and Copeland reported changes in 1.2 per cent of their cases. It is interesting to note that only two patients were found to have aleukemic myelogenous leukemia, and one of these showed bone changes. It seems therefore that, as in lymphatic leukemia, the greatest bone changes are present in the aleukemic group.

Children under six years of age showed the most common changes. Nine of the twelve patients with lymphatic leukemia were in this age group. The reasons for this are apparent when it is considered that all the bone marrow is active in children while in adults activity is generally limited to the sternum, ribs, and vertebrae. The periosteum in children is less firmly attached to the shafts of the long bones than it is at a later age.

Bone metabolism is more active and hence may be more easily disturbed in growing bones. The reserve blood-forming capacity, beyond the normal demands, is comparatively less in children so that any overload results in an expansion and increase in the bone marrow with subsequent atrophy and erosion of the cortex.

## Bone Distribution (Table II)

Anatomically the long bones were found to be most often involved, especially in the metaphyses. The ulnae, radii, humeri, and femora were affected in over 75 per cent of the positive cases when these structures were examined. The tibiae, fibulae, pelvis, and skull were next most frequently involved in that order (Fig. 1). The vertebrae showed a higher incidence of involvement in adults than in children.

BONE CHANGES IN LEUKEMIA—DORSEY

TABLE III. X-RAY FINDINGS IN FOURTEEN POSITIVE CASES

	Demineralized	Moth-Eaten	Transverse Lines	Periosteal Elevation	Sclerosis
Acute and subacute lymphatic leukemia	3	2	2	2 1?	1
Chronic lymphatic leukemia	1	3	0	0	0
Aleukemic lymphatic leukemia	4	3	3	1 1?	1
Total	8	8	5	3 2?	2
Acute and subacute myelogenous leukemia	0	0	0	0	0
Chronic myelogenous leukemia	1	1	0	1?	0
Aleukemic myelogenous leukemia	0	1	0	0	0
Total	1	2	0	1?	0
Acute monocytic leukemia	0	0	0	0	0
Sum Total	9	10	5	3 3?	2

Roentgen Features (Table III)

1. *Bone Destruction.*—This was the most common feature in most of the cases studied and is a manifestation of expansion of the marrow cavity by leukemic infiltration. Radiologically this change may be localized to one part of a bone or unevenly distributed throughout the length of the shaft. It is detected as irregular areas of decreased density and destruction. The cortex may be thinned in many areas, the bone density is reduced, and the trabecular markings appear more prominent because of absorption of some of the finer trabeculae. Many cases were seen in which the only roentgen finding appeared to be demineralization. These cases have not been included in the list of positive cases on this one isolated finding alone. However, osteoporosis may represent the earliest change. Sixty-two per cent of the positive cases showed moth-eaten areas of destruction, most marked near the metaphyses; a greater percentage showed concomitant osteoporotic changes.

2. *Transverse Lines of Diminished Density.*—A narrow zone of diminished density just proximal to the metaphyses of the long bones, most marked where the growth is most rapid, was a prominent feature in many cases. The cause for this is not clear since microscopic sections have shown infiltrative masses of leukemic cells here, but the degree of infiltration was no greater than elsewhere in the bone. This band of diminished density is not a feature of leukemia alone. It may be seen in scurvy, and has been reported in cases of septicemia and meningitis. It most likely reflects an alteration of bone growth as a result of a disturbance involving the entire body. This phenomenon was first described by Baty and Vogt in 1935. They reported its occurrence in 70 per cent of a total

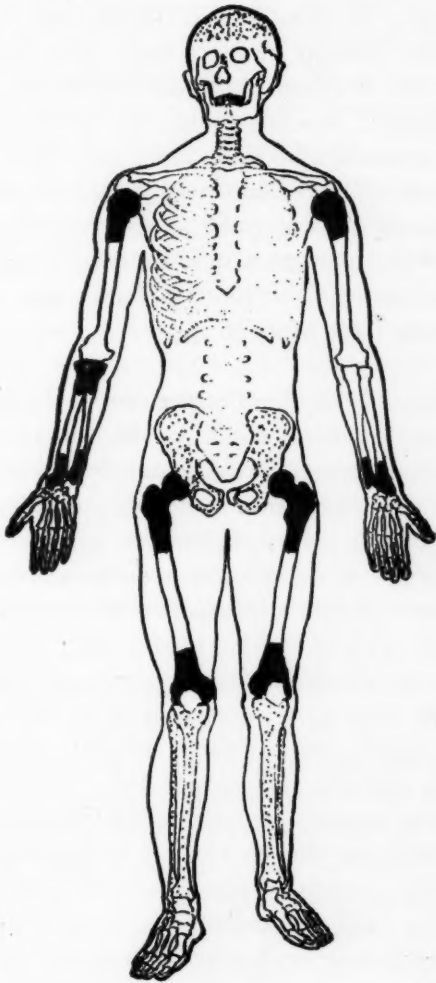


Fig. 1. Skeletal distribution for all cases: skull, 40 per cent; vertebrae, 20 per cent; humeri, 80 per cent; ulnae, 100 per cent; radii, 100 per cent; pelvis, 50 per cent; femora, 86 per cent; tibiae, 70 per cent; fibulae, 60 per cent; flat bones, 38 per cent; short bones, 100 per cent. Key: solid area, 75-100%; dotted area, 40-75%; white area, less than 40%.

of forty-three patients.<sup>1</sup> Eighty-six per cent of the patients were under six years of age. In the series studied by the author it was present in approximately one-third the positive cases. All of the patients were under six years of age and all had lymphatic leukemia.

3. *Periosteal Reaction*.—Periosteal elevation with new bone formation along the shafts of the long bones appears as a linear area of extra density parallel to the shaft but separated from it. The new bone may be smooth in outline and of fairly uniform density or it may be irregular. Actually it represents leukemic infiltration under the periosteum, elevating it, and stimulating new bone formation. Similar changes have been found involving the sternum, skull, and vertebrae in autopsy studies. Roentgenologically, however, it is usually demonstrable only along the shafts of the long bones. This finding was present in three of the fourteen positive cases and suspected in three others. The three cases showing definite periosteal elevation were all of the lymphatic type and all were under three years of age.

4. *Bone Sclerosis*.—Osteosclerotic changes occur in leukemia as noted by Mendl and Saxl.<sup>4</sup> They are, however, less common in children and are late manifestations, probably an attempt at healing of the earlier destructive process or may be the result of maturation of leukemic cells into osteoblasts.<sup>3</sup> Localized osteosclerosis was present in two cases, both of the lymphatic variety. The respective age of these patients was seven and fifty-five. The long bones appeared to be free of this change which was localized to the pelvis, one vertebra, and one metacarpal bone. Considerable disagreement exists concerning the relationship of osteosclerosis as seen in chronic myelogenous leukemia and a condition first described by Rosenthal and Erf in 1943 as myelofibrosis or myelosclerosis.<sup>5</sup> The latter resembles chronic myelogenous leukemia in many respects, especially the peripheral blood findings and organic infiltration. The clinical course and mode of onset, however, differ considerably from that of myelogenous leukemia. Many feel that it is primarily a neoplastic disease evidenced by myeloid metaplasia, and that it is a pre-malignant stage of leukemia which eventually terminates as such. The disease generally passes through a series of stages with the final picture that of a full blown leukemia. It is possible, how-

ever, that one may have osteosclerosis with a leukemic blood picture without going through the preliminary stage of polycythemia. Not all cases of osteosclerosis develop into leukemia.

Formerly, Albers-Schonberg's disease was included in this category. It is generally agreed now that this represents an entirely different disease entity. The transformation of the medullary portions of the bone into dense compact bone is a result of a defect in the development of the mesenchymatous elements, rather than a fibroblastic reaction to a stimulus, with extramedullary hematopoiesis greater than could be expected from the degree of marrow replacement. Roentgenologically, the early changes in myelosclerosis are widening and increased density of the trabeculae. This is followed by an irregular deposition of bone throughout the marrow cavity. The endosteum eventually merges with the marrow cavity but the bone cortices are not thickened as in Albers-Schonberg's disease. The degree of change is more or less uniform throughout the skeleton; only in the skull is it difficult to detect distinct abnormalities. Regardless of the mode of onset, these cases usually eventuate into leukemia.

#### Duration of Life Following Bone Changes

In all cases the patients died within a few months after bone changes had been detected.

#### Differential Diagnosis

1. In children a roentgenological differential diagnosis must be made from neuroblastoma with generalized metastases which may simulate the advanced stages found in leukemia. In both diseases films of the skull may show a diffuse granular mottling and the cranial sutures may be separated because of increased intracranial pressure. One of the most important differential points is found in the distal bones of the extremities. The metastases of neuroblastoma involve particularly the proximal ends of the proximal long bones, and much less, if at all, the bones distal to the elbows and knees. The distribution is less symmetrical in neuroblastoma. The degree of destruction is often greater and periosteal reaction may be of the perpendicular type. There is usually a prominent mass not resembling spleen in the abdomen and neuroblastoma is distinctly uncommon beyond puberty. The blood picture is of basic importance.

(Continued on Page 159)

## Topical Skin Therapy with an Antihistaminic Tar Ointment

By Alex S. Friedlaender, M.D.

and

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Detroit, Michigan

IN THE LOCAL therapy of chronic skin eruptions, the combination of two or more effective agents, in a suitable ointment base, frequently affords the patient far greater symptomatic benefit than it is possible to obtain from any one drug employed alone. Among the great number of medicaments recommended and employed in topical therapy, crude coal tar, or one of its derivatives, is generally acknowledged to be one of the most valuable in an extremely wide range of cutaneous disorders. Another group of medicaments which in a relatively brief period have found very wide application in local treatment of pruritic dermatoses are the antihistaminic drugs. While each of these therapeutic agents may prove beneficial in the same condition when used separately, their mechanism of action differs. It would not seem illogical therefore to use them together with the expectation of at least an additive effect, and in the hope of a possible synergistic action. The present study was undertaken to determine the effectiveness of a combination of crude coal tar extract (5 per cent liquor carbonis detergens) and a potent antihistaminic agent (2 per cent pyrilamine maleate) incorporated in an emulsified hydrophilic base in the topical therapy of chronic eczematous and certain papulo-squamous dermatoses. Topical therapy can by no means be deemed curative in such chronic dermatoses, since some, notably the atopic and contact eruptions, are more permanently benefited by control of underlying sensitizations. Symptomatic local therapy is necessary, however, to alleviate discomfort and to promote healing of the skin, until a longer lasting solution of the problem can be attained.

Sixty-seven patients in various age groups who presented chronic or recurrent eruptions of several months to many years duration were treated with the antihistaminic-tar combination. Fifty-four of

these cases could be classified under the heading of atopic dermatitis, while the remainder were cases of contact dermatitis, nummular-type eczema, seborrheic dermatitis, and psoriasis. Treatment with the combination ointment was generally initiated during subacute or chronic stages, and avoided during periods of acute difficulty. Whenever possible, the effectiveness of the various ingredients alone, as well as in combination, were compared in the same patient. Four ointments were used for this comparison. One composed of the hydrophilic base alone; another consisting of the base and coal-tar; a third made of the base and antihistaminic, and finally the complete combination. In some cases it was possible to compare their effectiveness by treating separate areas of involvement simultaneously in the same patient. In other instances, it was more feasible to alternate the use of various preparations.

Patients, or their parents, were instructed to apply the preparation to affected areas two or three times daily. In cases of extremely widespread dermatitis the areas of greatest involvement were selected for treatment. Patients were specifically instructed to discontinue the application in the event of increased irritation of the skin, or aggravation of the eruption. The period of use depended to a great extent on the results obtained. It was continued for at least one week, except where untoward results occurred, and for as long as the patient appeared to derive benefit. In several instances, it is still being used after more than six months of almost daily use.

In evaluating results, improvement in the dermatitis of more than 50 per cent with associated relief of discomfort and itching was considered an excellent response. Improvement of 25 to 50 per cent was rated fair, and less than 25 per cent was deemed poor. When benefit occurred, it was usually evident within two to three days, although in some instances slower involution took place, with improvement noticeable only after four to seven days of regular application.

As will be noted in Table I, the results were excellent in the majority of those with atopic eczema. Thirty-five out of fifty-four patients with this condition, in various age groups, attained benefit from the local use of this combination. This consisted in rapid alleviation of pruritus, followed by marked improvement in the character of the skin after a few days of use. In the small number

The combination ointment in this study was supplied by the Tarbonis Company, Cleveland, Ohio, under the trade name "Histar."

# ANTIHISTAMINIC TAR OINTMENT—FRIEDLAENDER AND FRIEDLAENDER

TABLE I. USE OF COAL TAR ANTIHISTAMINE OINTMENT

Diagnosis	Number of Cases	Excellent	Fair	Poor	Aggravated
Atopic Eczema—Infantile type (age 6 months to 2 years)	12	6	2	1	3
Atopic Eczema—Childhood type (age 2 to 12 years)	20	13	4	3	—
Atopic Eczema—Adolescent and adult type (age 12 years and older)	22	16	3	3	—
Eczematous—Contact-type dermatitis	2	1	—	1	—
Seborrheic dermatitis of ears	2	2	—	—	—
Psoriasis	6	4	—	2	—
Nummular Eczema of hands and forearms	3	2	—	1	—
Total	67	44	9	11	3

of cases of eczematous contact-type dermatitis, seborrheic dermatitis, psoriasis, and nummular-type eczema of the hands and forearms, the results were likewise favorable in the majority. Comparison of the combination ointment with its separate ingredients indicated that the combination was generally more effective than any of its components. An analysis of the records of forty-four patients who obtained an excellent response from the combination showed that 27, or 61 per cent, noted greater benefit from the combined preparation than from any of the individual ingredients. Ten patients were benefited equally by the antihistaminic component, while seven others found the coal-tar ointment as effective as the combination.

In the entire groups of sixty-seven patients treated, only three, all infants, showed aggravation of the dermatitis attributable to the topical medication. In each instance, coal-tar was found to be the offending ingredient. All were able to tolerate the antihistaminic component and the ointment base without difficulty.

## Discussion

The cases included in the present study are those where both coal-tar and antihistaminics are frequently desirable for local therapy. Crude coal-tar has been long considered one of the most valuable local agents in the treatment of cutaneous diseases, and has enjoyed especially wide application in the symptomatic management of atopic eczema and psoriasis as well as many other common dermatologic disorders. In moderate strengths, it is soothing and anti-pruritic, and is reported to have anti-acanthotic, keratoplastic, vasoconstrictor, as well as anti-parasitic effects.<sup>4</sup> While crude coal-tar ointments are frequently objectionable because of their color and staining characteristics, such derivatives as liquor carbonis detergens in an emulsified hydrophilic base are much more pleasant to use and aesthetically ac-

ceptable to the patient or patient's family. Coal-tar preparations are generally well tolerated when applied in moderate strengths to limited areas of skin which are not acutely inflamed. As evidenced by three patients in this series, allergic eczematous sensitization occurs in a small percentage. It is also well to point out that photosensitization may follow the use of coal-tar, and direct exposure to the sun should be avoided during the treatment period.

In the relatively brief period since their introduction, antihistaminic agents have earned an important place in the symptomatic management of pruritic dermatoses. When topically applied in suitable vehicles, they are markedly anti-pruritic, and possess local anesthetic properties which are several times that of procaine.<sup>3</sup> Allergic eczematous sensitization and primary irritation are known to occur more frequently with certain members of this group than with others.<sup>2</sup> Pyrilamine maleate (dimethyl - aminoethyl - methoxybenzyl - aminpyridine) ranks high among antihistaminic preparations in point of therapeutic effectiveness, and in 2 per cent concentration exerts a high degree of local action with a minimum of primary irritation or eczematous sensitization.

The vehicle used to incorporate active drugs for topical therapy must vary with the chemical characteristics of the medication as well as with the type of dermatologic condition being treated. In acute stages, compresses and shake lotions are best tolerated, but as the condition becomes subacute or chronic, the skin is better able to tolerate medicaments incorporated in pastes and ointments. Hydrophilic ointment bases present several advantages over other types of ointments. They are easier to apply and are not so noticeable on the skin. They are usually quite stable and non-irritating, and of low sensitizing potential. In the present study where it was desirable to use two medicaments of varying solubility, such as a

water-soluble antihistaminic, and coal-tar which is insoluble in water, this type of vehicle is of additional advantage.<sup>1</sup>

### Summary

1. A combination of crude coal-tar extract (5 per cent liquor carbonis detergens) and an antihistaminic agent (2 per cent pyrilamine maleate) incorporated in an emulsified hydrophilic base was used in the local therapy of sixty-seven patients with chronic eczematous and papulo-squamous dermatoses. The symptomatic response in forty-four cases was considered excellent; in nine others a fair response was noted; while only eleven patients in this series were not benefited.

2. Only three patients in the entire series failed to tolerate the combination. Each was found sensitive to the tar component, and were able to tol-

erate the antihistaminic and ointment base without difficulty.

3. Comparison of the combination with the ointment base containing either the coal-tar ingredient or the antihistaminic drug, indicated that the combination was generally more effective than any of its components.

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## BONE CHANGES IN LEUKEMIA

(Continued from Page 156)

2. Cancer metastasis of the mixed productive and destructive type, as well as lymphosarcoma and Hodgkin's disease may simulate leukemic involvement of bone. The transverse bands of diminished density are absent in these states and the clinical picture accompanying these conditions usually makes the diagnosis evident. Ewing's tumor occasionally will resemble a solitary lesion of leukemia in bone and when this disease becomes widespread the resemblance may be strengthened. Again clinical and laboratory findings may have to provide the diagnosis in rare instances. The same is true for the so-called histiocytoses.

3. Less frequently osteomyelitis, especially the hematogenous type, hyperparathyroidism and tuberculosis may be considered in the differential diagnosis. Again clinical and laboratory data may be needed to differentiate with complete assurance.

### Summary and Conclusions

1. Two hundred and forty-nine cases of leukemia have been reviewed and the bone changes in seventy-two adequately radiographed cases are presented.

2. The distribution, incidence and type of changes are described.

3. The clinical and roentgen relationship between bone changes in chronic myelogenous leukemia and myelosclerosis is discussed in some detail.

4. Roentgen diagnosis of the bone changes in leukemia requires that it be differentiated from neuroblastoma, cancer metastases, tuberculosis, hematogenous osteomyelitis, diffuse type of Ewing's tumor, and Hodgkin's disease.

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## A Physician's Obligation to the Courts

### The Technique of Being a Good Medical Expert Witness

By Edward D. Spalding, M.D.

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TWO YEARS ago in February, there appeared in the *Detroit Medical News* an editorial entitled "Expert Testimony, Called and So-Called." The events that led to this bit of writing were some especially flagrant examples of so-called expert testimony in a case to set aside a will in one of the Detroit courts. In this editorial a specific change in court procedure was outlined which might help obviate the kind of testimony that is a disgrace to both the medical profession and the bar.

One of the reasons that expert testimony, and especially medical expert testimony, has come to command so little respect in court is that, unfortunately, there are physicians to be had who, for a price, are willing to testify to almost anything on either side of a case. And there are attorneys who avail themselves of such testimony.

At the close of this talk some of the ideas in that editorial will be discussed. However, first there are some suggestions as to technique for the medical expert witness before going into court, and later while on the stand.

One basic statement should be made at the outset that it is *not* the duty or function of a medical expert to *win a case* but rather to *inform the Court*, and Jury if there is one, on technical matters in which he is especially trained.

Before going into court an expert witness should spend some time familiarizing himself with all the available facts bearing on his phase of the case. Nothing is quite so disconcerting, after having discussed the medical facts and expressed an opinion, as to have the opposing counsel then call attention

to certain salient points that have not been given consideration. After surveying the available data a professional opinion should be carefully formulated in advance. To depend on a general knowledge of the subject is not enough. Moreover, all this should be gone over in detail with the attorney in advance, so that he will know how such an opinion can best be presented, and any pitfalls to be avoided can be pointed out.

Later, on taking the stand, there are a number of do's and don't's:

1. A medical witness should be sufficiently conversant with court procedure to know his rights, but also his limitations. The world in which the physician practices is quite different from the situation in court. At the bedside the doctor makes the decisions and gives the orders, but on the stand he is under the direction of others. Many doctors have difficulty in adjusting themselves to this—especially are they likely to resent cross-examination. They are in the habit of having their statements accepted without question. But if there were no differences of opinion the case would not be in court in the first place. And cross-examination is one of the best devices man has developed for ferreting out the truth; not one man's opinion as to what is the truth. If a professional opinion is well grounded, it should stand up under cross-examination, in fact under cross-examination it can often be greatly reinforced (something many lawyers have learned to their sorrow). Nothing is more effective in court than for a well-trained professional witness to be able to carry his point over opposition.

2. Although an expert witness is frequently testifying as to his opinion in a technical matter, nevertheless it is most important to stick to facts and not make overstatements. A good opposing attorney is very quick to appreciate when a witness has overstated his point and much excellent testimony has been rendered rather ineffective when the witness has had to retract an extreme statement. If I may be pardoned for one personal reference, the only advice my father, himself an attorney, ever gave to me about testifying was years ago when he said, "If you will stick to what you know you should have no trouble as a witness."

3. When testifying on a technical subject avoid as much as possible the use of technical language. Remember those whom you are addressing are laymen in the medical sense, however learned they may be in their own fields. The purpose of all technical testimony is to convey ideas, and simple descriptive language is by far the most effective for this purpose. The failure to do this is one of the worst faults of doctors as a whole as witnesses. If at times a specific technical word need be used, immediately explain it parenthetically in simple language.

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## PHYSICIAN'S OBLIGATION TO THE COURTS—SPALDING

4. Be sure you understand the question before starting to answer it. Don't be hurried; take time to properly phrase your answer, considering all the possible implications before you speak. The opposing attorney will be most obliging in leading you out on a limb which he will promptly and dextrously saw off when you have committed yourself and become completely involved.

5. Never hesitate to say "I don't know," if such is the case on any particular point. It is true that a qualified expert is supposed to be informed in his own subject, but no one is omniscient, and only the tyro thinks he must make it appear so. If a witness does not know the answer in a specific matter, it is very soon apparent, and to attempt to make it seem otherwise is to run the great risk of being made ridiculous. The trained expert saves himself difficulty and embarrassment from any further questioning by promptly admitting his lack of knowledge on a particular point. If the opposing attorney continues to press his questioning the court will say "The witness has already testified that he does not know."

6. Don't talk too much; be as concise in answering as possible. Remember every unnecessary word, or the volunteering of additional information, gives the opposition another point of attack. Furthermore, whenever possible, hold in your memory the exact data (dates, measurements, symptoms, and signs) contained in a case record and do not take it with you on the stand (unless ordered to do so). This will require meticulous preparation beforehand, for such data cannot be guessed at. However, if it can be done and done right in all details, it makes it obvious that one is thoroughly conversant with the facts in a case. It also deprives the other side of many openings for cross-examination. Remember, any document which is used on the stand to refresh the memory must, on request, be handed over to opposing counsel for perusal *in its entirety*. Why furnish the opposition with a springboard from which to start his cross-questioning.

7. Never lose one's temper, in spite of what may seem to be quite uncalled-for rough treatment by a cross-examiner. It is an old trick in the boxing ring to make your opponent mad. A witness who lets his emotions get out of hand is at a great disadvantage. He does not think well and says many things better left unsaid. A doctor who preserves the dignity of his profession and the court under exasperating attack gains the respect of all present.

8. Once a technical witness has conservatively stated an honest and well-founded opinion he should not permit a cross-examiner to "whittle it down" by postulating various exceptional conditions. This is still another basic reason for not overstating one's position in the first place. The witness having made a careful affirmative statement should not permit the word "but"—and then a qualifying clause to be put in his mouth. The "Yes,

but—" witness is of little help to the court, or credit to himself.

9. At times a cross-examining lawyer will attempt to force an expert witness to answer some questions by only "yes" or "no." A material witness who testifies as to facts can be made to do this. But an expert witness is there to testify as to his technical *opinion* (by virtue of his special training). If a question is so phrased, and of course it is often deliberately so done, as to give a distorted impression if answered by "yes" or "no" without amplification, the expert can insist that a proper qualification be added in his answer. He is there to inform the court as to his opinion in the light of his special knowledge.

10. Finally, no expert witness *ever* need compromise the truth or himself.

In closing, I wish to go back to the ideas for modifying court procedure concerning expert witnesses editorially expressed.

In any litigation, it is the right of either side to bring in such supporting testimony as they can properly secure. At present, however, the court is often confronted with a direct conflict in medical testimony as introduced by the two sides. The suggested plan is a means by which the court may avail itself of information on technical matters from those especially qualified in any particular field.

Under this plan a broad panel of qualified experts, subdivided into special fields, is set up by an appropriate official organization in the various professions (in the case of medicine the County or State Medical Society), such a panel to be carefully revised each year on the basis of past performance.

Experts to fill this rôle should have three basic qualifications:

1. Unquestioned integrity.
2. Recognition as being outstanding in their chosen field.
3. Ability in the expression of technical knowledge, and the specific implications to be drawn from such.

In any particular case should the court find itself confronted by seriously conflicting professional testimony, it could select one or more experts from an appropriate panel. Such experts would then be *called by the court* as neutral wit-

(Continued on Page 182)

## Use of Scientific Records and Exhibits in the Court Room

By Eli Sherman Jones, M.D., F.A.C.S., F.I.C.S.

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**T**ESTIFYING in court may seem to be quite a chore to a doctor. However, if one treats accident cases, it becomes his duty to appear in court to give his findings if called upon to do so. All accidents and every occupational disease occurrence are potential law suits. The eventual adjudication of the case may depend upon the doctor's testimony. The doctor should first take care of his patient for any injury that requires immediate attention. Next, the most careful history should be taken and recorded as soon as possible. Should the patient be unconscious, the facts should be obtained from witnesses to the accident.

It is not the doctor's rôle to be partial to one side or the other. It is his duty to obtain the true facts and those given on the first examination are usually the most accurate. As days and weeks and sometimes even years pass, it would be very difficult to remember just exactly what happened at the time of the accident. With the passage of time, one's ideas may change a great deal.

No doctor is criticized for doing his best to obtain a correct history from his patient. The doctor, of course, must accept the word of his patient, and if it later turns out to be false, the doctor is not at fault. A correct history is important for the care and treatment of the patient. If this history, when it is reduced to writing, and has some bearing upon the diagnosis and treatment of a patient, later becomes evidence in a court case, it is as much a scientific record as x-rays. For this reason, if for no other, a correctly recorded, detailed history is important.

The history which states that the patient was in an automobile accident and broke his finger or bruised his leg is really of no value. It may be of

great value in the treatment of the patient to know whether there was a head-on collision or if the car was struck from the rear or from the side and on which side. It is also important to know who was driving the car at the time of the accident, and if the car was struck on the side of the driver or on the opposite side. It is necessary to know if the passenger was riding in the front or back seat. The position of the person in the car may determine the type of injury. An arm rest may cause a fractured pelvis. The steering wheel could cause an intra-abdominal injury. It is most embarrassing, a year after an accident, to be asked which leg was hurt or which finger was broken when the record shows only a finger or leg. Accuracy of records is as important as accuracy of therapy.

It is the doctor's duty to make his examination thorough and use any test that will help evaluate his patient's physical and emotional state. This includes x-rays, body fluid tests, biopsies and even autopsies. Under certain circumstances, it may be just as important to run a blood alcohol test as it is a blood count in order to accurately determine the condition of the patient. Whether or not the records and data obtained from such an examination should be admitted in evidence in court is the problem of the court to decide. It is the doctor's duty to take x-rays and to perform any laboratory procedure needed to properly care for a patient, and he cannot be censured for so doing. If these diagnostic procedures are omitted, the question of neglect may arise. The findings thus obtained are necessary for the proper care of a patient, but due to rules of law may not be proper evidence in a case tried in court.

Sometimes there is a question who should present technical records or laboratory findings. The court may refuse to permit one to testify from reports received from a laboratory. It is a rule of law that a person can testify only as to his personal knowledge. Even though the doctor on the witness stand is under oath to tell the truth and though he may quote correctly from the written reports of a technician or laboratory, the doctor may be prohibited from testifying, the reason being that the other side does not have the opportunity to cross-examine the technician who prepared the report for the doctor. When the doctor testifies from a report of someone else, it becomes hearsay evidence and may be excluded. For example,

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if a doctor is permitted to testify from the record of a technician on a test for carbon monoxide, it may be very important for the other side to be able to examine the technician in order to show that the color comparison test is not accurate. It might possibly be that the only purpose of taking the test was to determine whether or not carbon monoxide was present in the blood and at the time it was not thought important to determine the exact percentage that was present. The doctor who is reading the report of the technician therefore cannot be subjected to the same type of cross-examination to which the technician might be subjected. Due to rules of law over which we, as doctors, have no control, our normal procedure, which is satisfactory from a physician-patient standpoint, becomes cumbersome when it is necessary to present all of the facts in a law suit. However, the court may permit the doctor to testify from laboratory reports if the doctor guarantees their authenticity.

Technical records such as x-rays, blood counts, blood chemistry, et cetera, are extremely valuable and important. However, they are only of value when they are accurate. Many examples of x-rays can be cited. With a fracture of the body of a vertebra, os calcis and many others, it may be impossible to tell at first whether the lesion is an old one or a new one. The position in which the picture is taken may or may not reveal a fracture. Oftentimes it is very difficult to diagnose dislocations such as an acromio-clavicular joint. Different opinions might be obtained from very competent men. Immediate x-rays are most valuable. Many things may happen between the time of the accident and the adjudication, and the original x-rays may be the determining factor as to the status of the patient at the time of the trial. It is the doctor's duty to know the facts, which may be difficult to obtain, if x-rays are not taken at once.

A specimen for laboratory analysis, unless taken by a technician at the time of examination, should be prepared and sealed in the presence of a witness and signed at the time of the preparation. If the test is not run under the immediate direction of the doctor and it is necessary to send the specimen by mail, a receipt should be required so that there is definite connection between the specimen taken and the delivery of the specific specimen.

Exhibits are most valuable and important in the court room. To what extent they should be used and how elaborate they should be is at the discretion of the court. Exhibits may alter testimony which is very sincere. For example, a patient was treated for two years for an alleged injury to his shoulder. He complained of a great deal of pain in abduction, extension and rotation; in fact with most movements of the shoulder. X-rays were all negative with questionable exception of the acromio-clavicular articulation. One roentgenologist thought there was a slight separation and two others thought not. However, giving the patient the benefit of a doubt, a permanent impairment percentage was estimated. Moving pictures had been taken of the patient at various occupations without his knowledge. Much to the surprise of the doctor, he was using one arm as well as the other without difficulty, completely abducting and extending his arm without the slightest evidence of pain or impairment. Any exhibit which shows true facts, regardless of whom it affects, should be admitted in court.

Technical records, which include written reports, x-rays, blood counts, blood chemistry, et cetera, are valuable. They are valuable in any court case that may result from an injury, or occupational illness, and may be of great value in protecting the patient's health and life, even years later. The doctor should exercise utmost care to see that records are not impounded by a court unless duplicates are obtainable. After they have served their purpose in court, they should be returned to the patient's permanent file. Upon request, the lawyer can usually be permitted to withdraw original x-rays, slides or preserved tissue, otherwise they are usually left with the court reporter for safe keeping. We, as doctors, should not hesitate in requesting the attorney to obtain the original exhibits or substitute copies if it is at all possible. Except in the case of x-ray pictures, slides or preserved tissue, copies or photostats can always be substituted for the originals. X-rays and the like are the property of the doctor or the hospital and they are directly responsible for their safekeeping. However, if they are used in the court, technical custody is placed in the court itself, and after final termination of a case, it ordinarily would be possible to have the custody returned to the doctor or the hospital.

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## Postpartum Pituitary Necrosis

By Walter J. Zimmerman, M.D., Palmer E. Sutton, M.D., and Albert Boyajian, M.D.

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THE PURPOSE of this report is to call attention to a postpartum endocrinopathy which is clear-cut and easily diagnosed except that its relative infrequency often permits it to be overlooked. Women suffering from pituitary insufficiency on the basis of postpartum necrosis of the gland (Sheehan's syndrome) are frequently treated as puzzling and refractory problems of anemia, hypothyroidism, hypo-ovarianism, Addison's disease, or functional hypoglycemia because the widespread endocrine deficiency with its specific origin is not recognized.

In 1914, Simmond's observations on the syndrome of panhypopituitarism were first published.<sup>4</sup> He noted a variety of lesions which might destroy the pituitary gland giving rise to the syndrome to which his name subsequently became attached. In 1937 Sheehan<sup>1,2</sup> pointed out the importance of obstetric hemorrhage and shock in the pathogenesis of Simmond's disease, and his careful studies indicated that a large proportion of verified cases of hypopituitarism in women were of this origin. The pituitary normally undergoes rapid involution at the time of the puerperium, and with severe hypotension occurring at the time of delivery it is peculiarly susceptible to vascular thrombosis and consequent infarction. Sheehan further indicated a correlation between the degree of pituitary destruction and the severity of the clinical manifestations. The severest cases were found to be associated with a loss of 95 per cent or more of the gland, moderate symptoms might follow a loss of 75 per cent, and no symptoms at all result where only 50 per cent is destroyed. It is because of these basic contributions to our knowledge of pituitary insufficiency that the term "Sheehan's syndrome" has become attached to this most important group of Simmond's disease resulting from postpartum pituitary necrosis.

### Clinical Picture

In the typical case, the clinical picture is characterized by a history of peripheral vascular collapse attending full-term delivery from which the patient dates the onset of the following symptoms:

failure of lactation, failure of re-growth of the pubic hair (which had been shaved for delivery), loss of axillary hair, loss of libido, atrophy of the breasts, weakness and malaise, loss of appetite, and intolerance to cold. In some instances, however, when initial destruction of the anterior lobe is not complete, there may be a long latent period between the delivery and the onset of symptoms.

Findings on physical examination will vary with the degree and duration of pituitary insufficiency. Generally the patient presents a striking pallor and evidence of moderate weight loss, but almost never extreme cachexia. The facial expression is dull and apathetic. In addition to the absence of pubic and axillary hair already mentioned, there may be thinning of the eyebrows and of the scalp hair. The skin is cold and dry, and atrophy of the breasts is noted. The blood pressure may be normal or low. Body temperature is often low and the pulse slow. There are no characteristic findings on examination of the heart, lungs, and abdomen.

Laboratory studies will reveal deficiency in the pituitary trophic hormones and a secondary deficiency of the hormones of all the target glands. The available laboratory procedures are classified in Table I according to the organ chiefly responsible for the abnormal finding.

While the fully developed case of Sheehan's syndrome presents the easily recognized clinical picture just described, lesser degrees of insufficient anterior pituitary function may occur and offer greater difficulty in diagnosis. This has been emphasized by Schneeberg et al,<sup>3</sup> who reported a careful study of eight survivors of postpartum hemorrhage and shock. They found laboratory evidence suggesting pituitary hypofunction in two cases where clinical findings did not indicate the typical Sheehan's syndrome.

### Report Of Case

*Case 1.*—Because of profuse vaginal bleeding occurring late in the third trimester of her second pregnancy, B. P., a twenty-three-year-old white woman, underwent delivery by cesarean section in June, 1952. The section was followed by hysterectomy because of uterine atony, and the patient's condition was such that transfusion of three pints of blood was required.

She first consulted the authors in October, 1952, with the following complaints which she dated from the time of her delivery: Extreme weakness and lassitude, intolerance to cold, weight loss of 17 pounds (from 128 lbs. to 111 lbs.), loss of sexual desire, and recurring severe frontal headaches. Questioning elicited history of failure to lactate and of subsequent breast atrophy,

# POSTPARTUM PITUITARY NECROSIS—ZIMMERMAN ET AL

TABLE I. LABORATORY STUDIES IN PITUITARY INSUFFICIENCY

Organ	Test	Findings in Pituitary Insufficiency	Patient, B.P.	Normal Values
Pituitary	24 hr. urinary gonadotrophins X-ray of sella turcica	reduced or absent normal	less than 6 mouse units normal	6 to 50 mouse units normal
Thyroid	B.M.R. serum cholesterol serum protein-bound iodine I <sup>131</sup> uptake	low normal or elevated reduced reduced	—25% 300 mg. %	—10% to +15% 150 to 230 mg. % 4-8 mcg. % 10% to 40% uptake in 24 hrs.
Adrenal Cortex	17-ketosteroids Kepler water test  serum sodium serum potassium serum chloride Thorn test with ACTH (intramuscular)	markedly reduced delayed diuresis "A" value usually <25 normal or low normal or high normal or low normal or reduced response	1.2 mg./24 hrs. "A" = 24  149 m.eq./l 4.3 m.eq./l 106 m.eq./l 46% decrease in eosinophiles	8 to 15 mg. in 24 hrs. "A" > 30  136-145 m.eq. per l. 3.5 to 5.5 m.eq. per l. 100-106 m.eq. per l. decrease in eosinophiles of 50% or more.
Ovaries	Vaginal smear 24 hr. urinary estrogens	loss of estrogen effect low	loss of estrogen effect	normal estrogen effect. 15 to 50 mcg./24 hrs.
General	Fasting blood sugar Oral glucose tolerance *Insulin tolerance test  Hemoglobin & R.B.C.	low flat curve hypoglycemia unresponsive- ness normochromic anemia	67 mg. % flat curve  Hb. = 70% C.I. = 1.0	80-120 mg. %   Hb. = 80 to 100%

\*While the insulin tolerance test has been widely cited as a procedure in the study of hypopituitarism, it should not be performed in this condition because of the dangerous hypoglycemic reaction which may result.

failure of re-growth of pubic hair and loss of axillary hair. There was no history of any background for psychiatric disturbance. Physical examination substantiated the history and further revealed marked pallor, a cold, dry skin, and coarseness of the scalp hair with loss of hair especially in the frontal area. The blood pressure was 110/70, oral temperature 97.0 degrees, and pulse 80 per minute. Findings on examination of the heart, lungs and abdomen were not remarkable.

The results of laboratory studies are indicated in Table I. These gave clear-cut evidence of deficient function of the anterior pituitary, and of the endocrine organs dependent upon pituitary stimulation. Studies not listed in the table included a negative chest x-ray, and an electrocardiogram which was normal except for low voltage T-waves.

The general appearance of the patient is shown in Figure 1.

## Diagnosis

The diagnosis of the typical case of Sheehan's syndrome is not difficult and for practical purposes can be established on clinical grounds alone. The chief difficulty lies in the fact that the condition occurs just infrequently enough so that it is forgotten. The direct relationship to obstetric shock, and the objective signs of failure of lactation, failure of re-growth of pubic hair, and loss of axillary hair are easily recognized clues.

The common syndromes of functional asthenia and psychoneurosis are easily differentiated by the maintenance of the secondary sex characteristics and normal findings on laboratory study.

Cases of anorexia nervosa may give rise to confusion because of similarities arising from amenorrhea, weight loss, reduced metabolic rate, and di-



Fig. 1.

minished adrenal cortical function as evidenced by low excretion of 17-ketosteroids. Anorexia nervosa more commonly occurs, however, in the unmarried woman, and positive evidence of psychopathology will be found. Marked emaciation is regularly present in anorexia nervosa, but rare in Sheehan's syndrome, and loss of axillary and pubic hair will not be noted in the former state.

Primary disorders of the target endocrine organs may cause confusion, especially if a direct relationship to obstetric delivery seems apparent. Conversely, in cases of Sheehan's syndrome, an incomplete diagnosis may be made, and the patient may be treated as primary hypothyroidism, Addison's disease, or hypo-ovarianism for long periods before the complete picture is recognized.

Other causes of true pituitary insufficiency must be differentiated. In cases of granulomas and fibrosis the history of obstetric shock will not likely be found. X-ray of the sella turcica will be helpful in detecting the pituitary tumors which may give rise to this syndrome.

### Treatment

The treatment of pituitary insufficiency is still a matter of investigation; no definitely superior program can be outlined at present. Although administration of the lacking pituitary hormones would be physiologically ideal therapy, there is no potent polyvalent pituitary preparation available. At present corticotropin (ACTH) is the only potent trophic hormone available, and its use is theoretically preferable to replacement with adrenal cortical hormones. Cortisone must be employed, however, if the patient fails to respond to ACTH.

Adequate replacement of thyroid function can usually be obtained with 1 to 2 grs. of desiccated thyroid daily. This should be instituted only after

correction of adrenal insufficiency has been obtained. Oral estrogen therapy should be employed for correction of ovarian insufficiency, and testosterone either by injection or in the form of buccal tablets is required for its protein anabolic effect.

### Summary

A case of postpartum pituitary necrosis giving rise to panhypopituitarism (Sheehan's syndrome) is reported, and the distinctive features of this condition are discussed.

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## USE OF SCIENTIFIC RECORDS AND EXHIBITS IN THE COURT ROOM

(Continued from Page 163)

### Summary

1. All accidents and occupational diseases are potential law suits.

2. History immediately taken is very important and should be a part of the patient's permanent file with a statement from whom obtained.

3. Tentative diagnosis is of little value. Permanent diagnosis is a necessity and a part of the record.

4. Casual, unconfirmed impressions are of little value.

5. Technical records must be honest and not taken as trick records to distort the facts.

6. One thoroughly capable of presenting technical exhibits or records should be permitted to present authentic records or exhibits.

7. It is the duty of the physician or the hospital to safeguard records and they ought not be impounded by a court after their useful purpose has been served.

There should be due notice given, when a case is set for trial. It is then incumbent upon the doctor to review the facts in the case and prepare himself by careful review of the records and exhibits which he may possess, as well as any other material, which will assist in careful, concise and clear testimony, presented so all may easily understand his statements. Technical records and testimony unexplained may be of no value to a jury and possibly confusing to the jurist. Regardless of how technical a report may be from which the physician is testifying, the physician must clarify it to the court and the jury or its value may be entirely lost.

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## Clinical Evaluation of Segmental Peridural Block

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THE VALUE and clinical usefulness of properly administered and completely effective regional analgesia and the many advantages it offers to patient, surgeon, and anesthesiologist are recognized and well appreciated by all those clinicians who have had sufficient experience with it. The outstanding benefits are the slight degree of disturbance of physiologic function of the patient and the optimal operating condition which it affords the surgeon.

Among the many regional anesthetic procedures, none is more useful than segmental peridural (epidural or extradural) block which involves the injection of local anesthetic solutions into the peridural space of the lumbar, thoracic, or cervical region. This procedure can be used to anesthetize any region of the body below the clavicle with maximum safety to the patient and least disturbance of physiologic processes. By varying certain factors, any selected number of segments can be anesthetized, thus affording the advantages of local infiltration, field block, intercostal, paravertebral, or subarachnoid block without their disadvantages, dangers, and complications. Moreover, after gaining experience with the technique it can be done almost as easily and as quickly as subarachnoid block. Yet, in spite of these obvious advantages, segmental peridural block has not been used in this country as frequently as it should have been. This probably has been due to certain misconceptions.

It is the purpose of this paper to present a detailed discussion of this method and to present sufficient clinical material to show that it is a useful, clinically practical form of analgesia.

### History

Peridural anesthesia was first accomplished in 1885 by Corning, who in the process of animal

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experimentation on subarachnoid injection, discovered by accident the possibility of introducing cocaine into the lumbar peridural space to produce anesthesia. His great interest in subarachnoid block left little time for further experimentation and nothing more was done about segmental peridural block until 1920 when Fidel Pages,<sup>17</sup> a young Spanish military surgeon, proposed the use of this procedure, which he called metameric anesthesia, for surgical procedures. The next year he reported its use in forty-three abdominal cases, but unfortunately his premature death terminated his work and consequently his report went unnoticed for a decade.

Six years after Pages' publication, Dogliotti,<sup>6</sup> obviously unaware of Pages' work, began extensive experimental and clinical studies on peridural anesthesia, the results of which he reported to the Italian Surgical Congress in 1931. His efforts, as well as those of Guiterrez<sup>10</sup> of Argentina, were largely responsible for the widespread use of this procedure in many countries of Europe and Latin America. In this country the procedure was given extended clinical trial by Odom,<sup>16</sup> Harger,<sup>11</sup> and several other American clinicians, but for some reason, it has not gained the widespread popularity it deserves. It is hoped the apathy which exists in the United States toward peridural anesthesia will be abandoned and more clinicians will take advantage of this excellent form of anesthesia.

### Anatomic, Physical and Physiologic Basis

Before discussing the technique, it might be profitable to briefly consider the anatomical, physical and physiologic basis of segmental peridural block.

*Peridural Space.*—The peridural space is the interval between the dura and the periosteum lining the vertebral column. It surrounds the arachnoid-dural sac in all of its extension from the foramen magnum to the conus terminales, which in the fetus extends to the sacral hiatus, but in the adult, due to unequal growth of the meninges and the vertebral canal, extends to the level of the second sacral vertebra. Inferiorly, the peridural space is continuous with the sacral canal, which is sometimes referred to as part of the peridural space; and laterally it communicates with the paravertebral tissues and spaces by means of the forty-eight intervertebral foramina.

The width of the peridural space varies greatly.

The anterior portion is very narrow and almost theoretical because of the close contact between the dura and the posterior longitudinal ligament, whereas the posterolateral portion, existing between the dura, on one hand, and the ligamenta flava and the lamina on the other, is wider, varying 3 to 6 mm, in different parts of the vertebral column. It is widest in the middle thoracic region, between the fourth and ninth thoracic vertebra, where the spinal cord and its dural sac are reduced in size. Although in the lumbar region it is slightly smaller, its triangular shape with the apex of the triangle corresponding to the posterior midline of the vertebral canal where the right and left ligamenta flava come close together produces a relatively wide space. As mentioned above, the peridural space superiorly does not extend beyond the foramen magnum, where the dural attachment to the entire circumference of the foramen forms an impenetrable barrier to any fluid proceeding upward.

The peridural space is filled with adipose connective tissue and loose areolar tissue, through which run the internal vertebral venous plexus, lymphatics, and the finger-like dural projections which surround the spinal nerve roots. Although this tissue is loosely adherent to the vertebral canal and dura, it is easily stripped from the dura by fluids which are dispersing from the point of injection.

*Negative Pressure of the Peridural Space.*—The existence of a negative pressure in the peridural space, first described by Heldt and Maloney in 1928<sup>12</sup> is now generally accepted. Whether this negative pressure is constantly present or is created by entrance of the needle into the space is a controversy. Dogliotti<sup>7</sup> believes that this negative pressure is composed of two elements. The first results from flexion of the vertebral column which causes an increase of the distance between the spinous processes of the vertebrae and consequent increase in the length and volume of the canal so that there is produced a transient negative pressure. This negative pressure is reduced within a short period of time by an influx of venous blood. The second element is created when the dura is pushed forward by an advancing needle to create a cone of depression; the further forward the dura is pushed, the greater the cone of depression and the greater the negative pressure. MacIntosh and Mushin<sup>15</sup> and Bryce Smith<sup>1</sup> have presented findings

which seem to support the theory that a true negative pressure exists in the peridural space which is independent of any artificial factor. These authors suggest that this negative pressure is present during inspiration and is transmitted from the thorax, indirectly by the negative suction action on the veins, and directly through the intervertebral foramina which connect the peridural with the intrathoracic space. Regardless of the cause, this negative pressure can be demonstrated by using either a water manometer attached to the hub of the needle or by placing a drop of solution over the hub of the advancing needle.

Rapid injection of solution into the peridural space causes a temporary increase of the cerebrospinal fluid pressure, which returns to normal after the injection.

*Dispersion of Fluids Injected into the Peridural Space.*—Following injections of fluids into the peridural space there is an homogenous spread of the solution in all directions away from the point of the needle and within a few seconds it passes through the intervertebral foramina and into the paravertebral spaces. In the thoracic region colored solution has been found as far distal as the angle of the ribs.

The extent of dispersion of fluids injected is in direct proportion to the (1) quantity of solution injected, (2) the force and rapidity of injection, and (3) the position of the patient. Although gravity plays a less important rôle than it does in spinal anesthesia, it does effect the dispersion of the liquid and should be considered. Thus the Trendelenburg position favors dispersion cephalad, where the sitting position favors a caudad dispersion. Furthermore, when a total volume is given in fractional doses, the dispersion is not as widespread as if it had been given in a single dose.

Solutions injected extradurally do not penetrate the dura, a fact first demonstrated by Sicard,<sup>18</sup> and Cathelin,<sup>2</sup> and later confirmed by Dogliotti and Bertocchi,<sup>8</sup> and many others. It is obvious, therefore, that local anesthetic solutions exert their effects beyond the point where the dura-arachnoid covering fuses with the perineurium of the formed spinal nerves. Since this usually occurs at the outer portion of the intervertebral foramen, the anesthetic block is effected in this portion of the intervertebral foramina and in the paravertebral

spaces and can, therefore, be rightly considered as paravertebral block.

**Physiologic Effects.**—The sequence of events following peridural block is the same as with subarachnoid block except that the onset is much slower. This delay in action is no doubt due to the fact that the solution must reach and effect nerve fibers distal to the arachnoid-dural cuff, and is also due to the fact that these fibers are protected by thick connective tissue sheaths which must be penetrated by the anesthetic solution.

Three to five minutes after the injection, there is increased temperature of the skin, indicating block of the vasoconstrictor fibers. At this time or soon thereafter, there is loss of temperature sense, and hypalgesia to pinprick, which develops into analgesia in ten to thirty minutes, depending on the drug employed. With 2 per cent xylocaine, complete analgesia occurs within ten to fifteen minutes; with 2 per cent procaine, it occurs in fifteen to twenty minutes; while with 0.1 to 0.2 per cent pontocaine or nupercaine analgesia it may not be complete until thirty minutes after the block is administered. This is followed by muscle weakness which may or may not progress to complete paralysis, depending on the concentration of the drug. With 2 per cent xylocaine and 0.25 per cent pontocaine, muscular paralysis is complete.

These changes occur first, and are most profound near the point of injection; the farther away from this point, the longer the time for onset, and the weaker the effect. This is probably the result of the progressive reduction in concentration of the drug as it disperses away from the site of injection and becomes diluted with tissue fluids.

The physiologic effects and alterations which follow peridural block are similar to those consequent to subarachnoid block. If complete analgesia is effected, there is concomitant complete sympathetic paralysis of the same segments with the consequent vasodilatation and hypotension, increase in intestinal tonus, and absence of sweating. The claim made by some enthusiasts of peridural block, that the degree of hypotension is not as great as it is with subarachnoid block is only true if less sympathetic segments are involved. When a certain number of sympathetic segments are blocked, whether this is produced with subarachnoid, peridural, or paravertebral block, the effects on the blood pressure are the same.

Thus it has been repeatedly observed that the effects on blood pressure of a peridural segmental block, extending from the first thoracic to the third lumbar segments, are the same as that of a high spinal anesthetic extending to the first thoracic segment. The fact that subarachnoid block usually effects more profound intercostal muscle paralysis, and anoxic hypoxia consequent thereto, may be a significant factor in aggravating the effects of hypotension and may account for the difference sometimes noted in the effects of subarachnoid and peridural block.

### Technique of Administration

The *preliminary preparation of the patient* is the same as with any other form of regional block. The patient is usually given a short-acting barbiturate, such as pentobarbital in doses ranging from 0.1 to 0.2 gm., two hours before the block, and morphine 10 mgm. or Demerol 100 mgm. with scopolamine 0.3 mgm. one hour before the block.

The *equipment necessary* for segmental peridural anesthesia is the same as for any regional block except that there should be a 20 or 19-gauge needle with a very short bevel and a well-fitting stylet. The wide diameter and short bevel of such a needle permits the administrator to more easily appreciate the varying degrees of resistance offered by the different tissues traversed and to better discern entrance into the peridural space. In addition, a Sise introducer or sharp, 18-gauge needle is employed to make a path in the skin, subcutaneous tissue, and supraspinous ligament for the short beveled needle. An extra medicine glass containing normal saline is also used.

Any of the *commonly employed anesthetic solutions* may be used in varying concentrations, depending on the effects desired. As previously mentioned, 2 per cent procaine, metycaine, intracaine or xylocaine, and 0.25 per cent pontocaine or nupercaine all effect a complete block. If motor block is not desired, one-half to one-third of the above concentration may be used. For sympathetic paralysis only, 0.2 to 0.5 per cent procaine, metycaine, intracaine or xylocaine or 0.02 per cent pontocaine or nupercaine may be used. In most instances, and unless contraindicated, epinephrine in concentration of 1:200,000 is added to the anesthetic solution.

The total volume of anesthetic solution depends on the extent of the block desired and the

diffusibility of the local anesthetic drug. It may be generally stated that if procaine is used 1.5 cc. of solution are used for each segment; if xylocaine is employed 1.0 cc. per segment is sufficient; whereas if pontocaine is employed it is necessary to inject 2 cc. per each segment. In other words, if block of six segments is desired it is necessary to use 6 cc. of xylocaine, 9 cc. of procaine, or 12 cc. of pontocaine.

The lateral position, with the patient in acute flexion, is the best position to perform peridural injection. Some clinicians, however, prefer the sitting position because of increased negative pressure resulting in the upper thoracic segments.

The *site of puncture* depends upon the segments to be affected. Since the injected solution disperses in both directions from the site of puncture, and since the extent of distribution depends on the volume and the force of injection, and the position maintained during and after the injection, it is best to select the interspace which is the midway point between the upper and lower limits of the block, if the patient is in the recumbent position. For a block of the lower three cervical and upper three or four thoracic segments, the seventh cervical or first thoracic intervertebral space is chosen; for block of the upper six thoracic segments, the third or fourth thoracic interspace may be chosen; for block of the upper abdomen, the puncture may be made in the seventh, eighth or ninth thoracic interspaces; if the lower thoracic and the lumbar segments are to be affected, the twelfth thoracic or first or second lumbar interspace are best sites, whereas if the lumbosacral nerves are to be blocked, the fourth or fifth lumbar interspace is usually chosen.

*Technique of Puncture.*—The skin is sterilized with an antiseptic solution and a skin wheal made over the point of the selected interspace. The subcutaneous tissue and the supraspinous and interspinous ligaments are also infiltrated with the local anesthetic solution. A sharp, long beveled needle is introduced through the skin so as to produce an opening for the blunt peridural needle. The skin is immobilized with the index and middle fingers of the left hand and the peridural needle is inserted exactly through the middle of the interspace. The direction of the needle, and the angle its shaft makes with the longitudinal axis of the body, depends on the interspace chosen. In the lumbar region, the needle should be inserted per-

pendicular to the skin, whereas in the thoracic region, its point is directed upward so that the shaft of the needle is in line with the vertebral space.

The needle is advanced, care being taken to remain in the midline. As soon as it reaches the supraspinous ligament, definite resistance is encountered due to the nature of the bevel and the density of the ligament. The needle is then advanced through the loose interspinous ligament which offers much less resistance than the supraspinous ligament. The advance is continued until its point is felt to meet a third and greater point of resistance which is the compact ligamentum flavum. If the resistance is absolute, the point is against bone, requiring that the needle be withdrawn and reinserted.

When the point of the needle has engaged the ligamentum flavum, the stylet is removed, and an attempt is made to inject saline with a 5 cc. Luer lock control syringe. If the bevel of the needle is within the compact ligamentum flavum this attempt will meet with considerable resistance, whereas if the bevel is still in the loose interspinous ligament, the resistance will be of only moderate degree. With a little practice the various degrees of resistance, as the needle passes through the various structures, become better appreciated and is more easily discernible.

While the thumb of the right hand exerts steady pressure on the plunger of the syringe, the shaft of the needle is grasped between the thumb and forefinger of the left hand and very slowly advanced (Fig. 1). The left hand should rest on the back of the patient so as to steady the needle and better regulate the pressure that is exerted against it. In this manner the needle is very slowly and gently pushed through the ligamentum flavum until it enters the peridural space. As soon as the bevel of the needle enters the peridural space, there is a sudden lack of resistance, and the liquid can be injected very easily.

In the middle thoracic region, where the obliquity of the spinous process is extreme and there are frequently bony spurs on the surface of the adjacent spinous processes, making introduction of the needle through the interspace difficult, I use the paramedian approach. This is carried out by making a wheal 1 cm. lateral to the midline and infiltrating the subcutaneous tissues including paraspinal muscles and periosteum of the lamina with a 20-gauge needle. This injection serves not

## SEGMENTAL PERIDURAL BLOCK—BONICA

only to produce analgesia but also to make a path for the short beveled peridural needle. The latter is inserted through the hole in the skin already made, and is directed toward the medial extremity

U-shaped manometer, the hanging drop sign or the balloon technique of MacIntosh. If the manometer is employed, it is attached to the hub of the needle after the stylet is removed, and

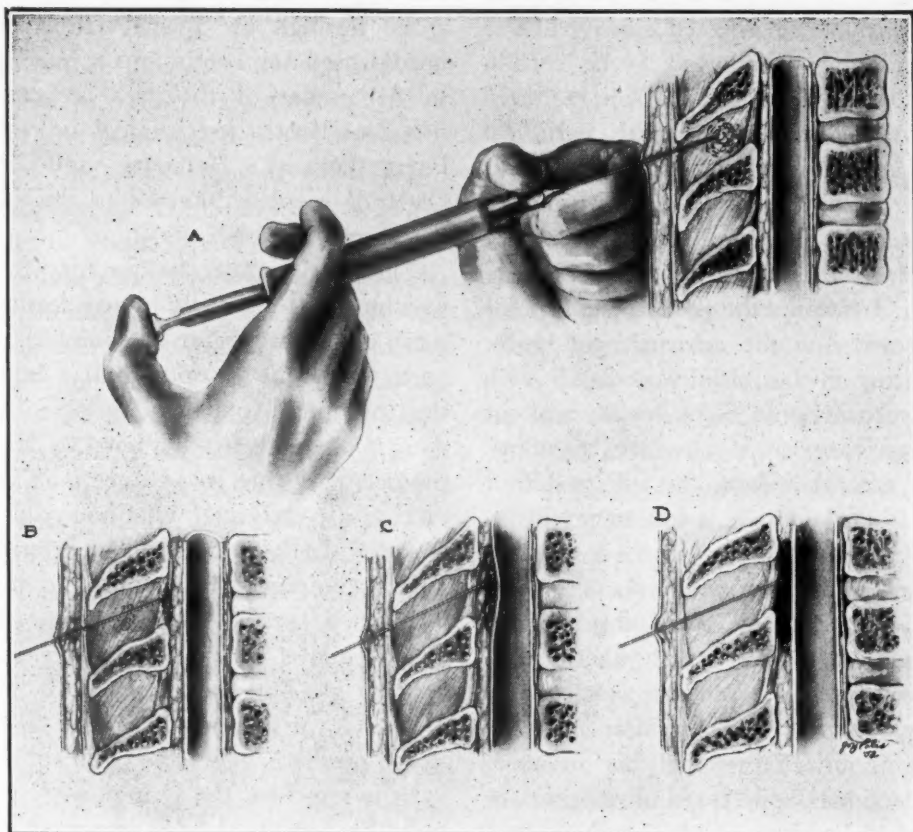


Fig. 1. Sagittal section showing technique of peridural block. (A) Advance of the needle with the left hand while constant unremitting pressure is being exerted on the plunger of the syringe. Some resistance is offered by the interspinous ligament to injection of the saline. (B) Needle point in the ligamentum flavum, which offers great resistance. (C) Entrance of point of needle into peridural space is discerned by sudden lack of resistance to the injection of the saline. Saline pushes dura away from point of needle. (D) Diffusion of the solution throughout the peridural space. (Bonica, J. J., "The Management of Pain," Philadelphia, Lea & Febiger, 1953).

of the lamina. As soon as this structure is contacted, the needle is maneuvered so that its bevel faces the superior surface of the lamina and is felt engaging the tough ligamentum flavum. The stylet is then removed, and the syringe filled with saline, is carefully adapted to the hub of the needle. The needle is then advanced slowly, in the same manner already described, until sudden lack of resistance indicates that the peridural space has been entered. As the saline solution is discharged, the force of the injection pushes the dura anteriorly away from the needle point and from the posterior wall of the canal.

Other methods employed to ascertain entrance into the peridural space, include the use of a

when the peridural space is entered a negative pressure will be recorded by the manometer. The hanging drop sign is utilized by placing a few drops of saline on the hub of the needle after the stylet is removed so that a drop is bulging out of the hub. As the needle advances and enters the peridural space, the saline will be sucked in and disappears into the needle. It is not unusual to hear a whistling sound at this time which corresponds to respiratory movements. Odom<sup>16</sup> improved on this by attaching a glass capillary tube, filled with colored saline solution and containing air bubbles, to the needle. Entrance of the needle point into the peridural space caused the fluid and air bubbles to move towards the patient. Mac-

Intosh<sup>15</sup> employs a small rubber balloon which is distended with air and which collapses when the needle enters the peridural space.

If, after all of the maneuvers, one feels certain that the needle is in the peridural space, 3 cc. of anesthetic solution are injected slowly, and a period of five minutes is allowed to be certain again that the needle is not in the subarachnoid space. As mentioned previously, with peridural block complete analgesia and muscular paralysis does not appear until twelve to twenty minutes or longer after the injection, whereas with subarachnoid block these appear within five to eight minutes. In case the anesthetic is inadvertently injected into the subarachnoid space, the amount of drug in the initial injection is such that the usual subarachnoid block results without any unusual complications. If, however, the above precautions are not taken, and the full peridural dose of the anesthetic solution is inadvertently injected into the subarachnoid space, a massive subarachnoid block will result which may jeopardize the life of the patient. After this waiting period the calculated dose of the anesthetic solution is injected at a rate of 1 cc. per second with intervals of three to five minutes after each 10 cc. of solution is injected. In this manner, systemic toxic reactions due to rapid absorption are minimized, sudden increase of the cerebrospinal fluid pressure and consequent headache is avoided, the anesthetic solution is prevented from spreading too far, and the nerves in the desired zone are better saturated. In addition, this avoids the pain in the arms, shoulders, back, or legs (depending on the site of injection) that sometimes follows rapid injections which probably is due to displacement or stretching of nerve roots. This discomfort disappears within a few minutes after the injection is stopped.

#### Continuous Peridural Block

Following the introduction of the continuous subarachnoid block technique by Lemmon,<sup>14</sup> Hingson and Southworth<sup>13</sup> in 1941 began to consider continuous peridural block for prolonged analgesia, but temporarily discarded it in favor of continuous caudal. However, they reintroduced the method in 1944 after they had devised a useful technique with the same equipment used by Lemmon for continuous subarachnoid anesthesia. The malleable needle was introduced into the peridural

space instead of the subarchnoid space, and then connected to the tubing and syringe. In January of 1947 Curbelo<sup>5</sup> began to employ continuous peridural segmental anesthesia by introducing a No. 3½ ureteral catheter into the lumbar peridural space through the special Huber-pointed Tuohy needle used for continuous spinal anesthesia, and in September of that year reported its use in fifty-nine protracted surgical procedures. A year later, Flowers, Hellman, and Hingson<sup>9</sup> and Cleland<sup>8</sup> reported the use of the same technique for obstetrical analgesia.

The continuous technique may be accomplished by inserting the needle in any segment. Although most clinicians prefer the lumbar segments, and particularly the second lumbar interspace where the peridural space is sufficiently wide, and danger of damaging the cord by losing control of the needle during its advance is minimal, we have successfully executed continuous peridural block in every thoracic and lumbar interspace.

The equipment for continuous peridural block includes a special 18-gauge short-beveled needle which allows passage of polyethylene tubing through it. This special needle is introduced into the peridural space in the usual manner. As soon as the needle engages the ligamentum flavum, the stylet is removed, the syringe with saline attached, and the needle slowly advanced until there is sudden lack of resistance. Injection of solution through this larger bore needle should offer no resistance at all and should feel as if the solution was being injected into the subarachnoid space. When it is ascertained by the various tests that the needle is in the peridural, and not in the subarachnoid space, the ureteral catheter is inserted through the needle and made to pass cephalad or caudad by directing the bevel of the needle accordingly. It is advisable to pass the point of the catheter to the segment which will be the midpoint of the zone of the block.

As soon as the catheter is properly placed, the needle may be withdrawn over it, aspiration of cerebrospinal fluid or blood is again attempted, and if none is obtained, an initial test dose of 2 to 3 cc. of solution is injected. If, after a waiting period of five minutes there is no analgesia or motor paralysis, the full therapeutic dose may be injected in the same manner as described under the single dose technique. The time and amount of subsequent doses depend upon the response of the individual patient to the first injection. It is im-

portant to remember that maximum intensity of the block does not appear until fifteen to thirty minutes after the injection, depending, of course, on the nature of the anesthetic agent.

### Management of the Patient

The position of the patient following injection depends upon the region to be anesthetized. Since we employ the interspace which is approximately in the center of the zone of anesthesia, it is not necessary to employ the Trendelenburg or sitting position in order to obtain spread of the anesthesia cephalad or caudad, respectively. If it is desirable to concentrate the anesthetic on one side, as is the case for herniorrhaphy, the patient is left on the side of the operation in order to take advantage of the gravitational factor. This is particularly important if the patient is to be placed with the affected side up, as for nephrectomy, in which case the injection should be made with the patient's affected side down and left in this position for at least five minutes after the injection before he is positioned for the operation.

The management of the patient is otherwise the same as with subarachnoid block. Immediately after the injection is finished, an intravenous infusion is started in order to have a method for rapid administration of analeptics if these become necessary. In case the block will involve many sympathetic segments and a moderate drop in blood pressure is expected, a vasopressor may be administered intramuscularly at this time if circumstances warrant it.

Surgical preparation of the operative site can be begun five minutes after the completion of the injection. By this time hypalgesia is present and the level of analgesia can be predicted by the scratch test. Since five to eight minutes are usually consumed for the preparation of the skin, testing with a sterile needle before the region is draped, should indicate a definite region of analgesia. In the event the analgesia is not complete, it is our practice to give the patient nitrous oxide, oxygen, and Pentothal in sufficient amounts to permit the skin incision. If it is desirable to have the patient awake, these can be discontinued when sufficient time has passed to have a complete block. Since many of the patients request to be asleep during the surgical procedure, 0.1 per cent Pentothal drip alone or in combination with a mixture of 50 per cent nitrous oxide and 50 per cent oxygen are

usually administered as complimentary agents\* only. With this technique less than one-half gram of Pentothal per hour is sufficient to keep the patient asleep if an adequate block has been effected. In this way, the patient is afforded the advantages of regional and general anesthesia without some of their disadvantages. Hypnosis is particularly indicated in children and apprehensive adults.

### Complications

As previously indicated, peridural anesthesia is accompanied with varying degrees of hypotension which is dependent upon the number of sympathetic segments involved. In case the block involves only a few of the sympathetic segments as obtains in peridural anesthesia for lower abdominal, inguinal, lumbo-renal, and lower extremity operations, the blood pressure variation in isotensive patients is negligible. However, if the block involves most of the thoracic segments, the blood pressure drop may be as much as 40 to 50 millimeters of mercury. Formerly, we would not tolerate this and would use vasopressor either prophylactically or for the active treatment of the hypotension. In the past two years, unless the patient's physical condition contraindicated it, we have intentionally disregarded such hypotension in order to minimize blood loss. This has been found particularly useful in radical mastectomies, decortication of the lungs, nephrectomies, and other surgical procedures which are attended with constant oozing and consequent loss of large amounts of blood. It should be emphasized that in patients with myocardial disease, hypotension should be avoided.

A more serious complication of peridural block is the inadvertent injection of the anesthetic solution into the subarachnoid space, resulting in a massive, total spinal block. Since two to three times the dose used for subarachnoid block is usually employed for peridural block, this complication must be avoided by proper technique and using a test dose of 3 cc. solution. When this complication occurs, it must be, of course, treated

\*For reasons of clarity, additional anesthesia has been designated as complementary or supplementary, depending upon the effectiveness of the block. Whenever the block has been perfect and for some reason additional anesthesia had to be given, this was classed as complementary anesthesia. Supplementary anesthesia has been defined as that given as a substitute in cases of partial or complete failure of the block.

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immediately with artificial respiration using an endotracheal tube and breathing bag with 100 per cent oxygen, intravenous fluids and vasopressor.

Occasionally, there is transient pain and headache during rapid injection, which improve immediately when the injection is completed. Rapid absorption of the local anesthetic solution with consequent signs of toxicity can occur if epinephrine has not been used or there is a tear in the venous plexus.

### Advantages and Disadvantages of Peridural Block

The *disadvantages* of peridural block are some of those inherent to regional anesthesia. They include:

1. The discomfort inherent to injections. This can be minimized by gentleness and dexterity on the part of the anesthesiologist and adequate anesthetization of the skin and subcutaneous tissues. In order to obviate this disadvantage we frequently administer a small dose (100-150 mgm.) of Pentothal just prior to execution of the block. This is particularly indicated in apprehensive patients.

2. It is technically more difficult than general anesthesia and certain other regional techniques and is attended with failures. This is a relative disadvantage which can be obviated with experience; with the proper knowledge of the anatomic, physical, and physiologic basis, and of the technique. It is surprising to note how quickly one can become proficient with this technique.

3. Another relative disadvantage is that the onset of anesthesia is comparatively slow. As one engaged in the private practice of anesthesiology, I well appreciate the time factor, but this disadvantage can be eliminated by using 2 per cent xylocaine with its quick onset of action and Pentothal  $N_2O-O_2$  during the first five minutes of the operation, as previously mentioned.

4. It is attended with sympathetic paralysis and consequent hypotension. Although this disadvantage can be obviated by using vasopressors, peridural block should be used with caution, if at all, in patients with peripheral circulatory failure.

5. There is the potential danger of inadvertent subarachnoid injection with consequent massive spinal anesthesia and possible damage to the spinal cord and/or the nerve roots.

6. The fact that the procedure requires a spinal puncture is a disadvantage to patients who particularly dislike such a procedure.

7. Occasionally the peridural block is not accompanied by complete muscular relaxation. This can be avoided by using the highest therapeutic concentration of the various local anesthetics and injecting the solution in repeated doses.

8. Like any other regional procedure, the duration is limited, but since one can employ the continuous technique, this is not a serious disadvantage. Single

injections last about two hours with xylocaine or pontocaine.

9. The fact that the patient remains awake during the procedure may be considered a disadvantage. This can be obviated by using heavy premedication and/or dilute solutions of thiopental.

In most instances these disadvantages are outweighed by the many advantages this form of anesthesia affords the patient, surgeon, and anesthesiologist.

1. Comparing it with general anesthesia, it causes much less disturbance of physiologic processes. This is a particularly important consideration in poor risk patients who have heart, renal and pulmonary diseases, diabetes, et cetera. Moreover, in the post-anesthetic period, nausea, vomiting, and disturbance of fluid balance are minimal or absent and are certainly much less than following general anesthesia.

2. Properly administered segmental peridural block has certain advantages over subarachnoid block. Since the dura is not pierced, no headaches occur and there is less danger of involving the medullary centers or of producing neurologic sequelae. Moreover, because in most instances it is not necessary to involve the sacral segments, post-anesthetic difficulty with bladder and rectal function do not occur, and there is not the increased tendency for thrombus formation consequent to the inactivity of the lower extremities associated with spinal anesthesia.

3. Since peridural anesthesia requires only one puncture, it has significant advantage over intercostal or paravertebral block. It is much preferred to local infiltration and field block because: (1) it produces a more adequate anesthesia and muscular relaxation, (2) does not distort tissues and does not interfere with post-operative repair, (3) less anesthetic agent can be used, and (4) affords longer postoperative relief of pain. The latter point has been stressed by many clinicians, who have noted that following peridural block pain may be absent for many hours after the anesthesia disappears. Moreover, the continuous technique can be used postoperatively to relieve pain.

### Personal Clinical Material

During the past four years peridural anesthesia was administered to 1,179 patients by my associates and myself in four general hospitals in

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TABLE I. AGE AND PHYSICAL STATUS

Age in Years	Physical Status							Total	
	I	II	III	IV	V	VI	VII	No.	Percent
0-9	8	2			11	1		22	1.7
10-19	43	6			36	3		88	7.4
20-29	96	12	1		19	2		130	11.1
30-39	139	7	2		27	8		183	15.5
40-49	158	42	6		45	17		268	22.7
50-59	107	37	11	3	30	6	1	195	16.5
60-69	33	78	13		12	17	1	154	13.5
70-79	21	52	19	1	7	14		114	9.6
80-89	2	6	4		1	5		18	1.5
90-99					4	3		7	.5
Total	607	242	56	4	192	76	2	1179	
Percent	51.4	20.5	4.7	0.4	16.3	6.5	0.2		100

Tacoma, Washington. An analysis of these cases, and a study of the data derived therefrom, has made apparent some interesting points which might have some clinical value. Some of this data are presented in Tables I to IV. The brief discussion which follows is presented to emphasize certain points.

*Administrators.*—The administrators included the author and two associates, who together administered approximately 70 per cent of the blocks; six residents in anesthesia, who administered approximately 26 per cent; and nine interns who administered the rest (4 per cent). It has been noted that after daily practice under supervision for three to four weeks, the novice becomes proficient in executing this block.

*Age and Physical Status of Patients.*—The ages of the 1,179 patients ranged from five years to ninety-three years, as shown in Table I. The youngest patient was one of the author's daughters who successfully underwent an appendectomy following injection of 5 cc. of 1 per cent xylocaine into the tenth thoracic interspace. This case is mentioned to illustrate that with proper premedication, children become excellent candidates for any form of regional anesthesia, including segmental peridural block. This procedure is especially useful in young patients who are to have emergency abdominal or lower extremity surgery and who have a full stomach. It is also indicated in old, poor-risk patients, provided that the anesthesia can be limited to a few segments such as obtains with herniorrhaphies and fractured hips. It should not be used if the operation necessitates extensive anesthesia because these arteriosclerotic patients do not tolerate the severe hypotension consequent to extensive sympathetic paralysis.

TABLE II. TECHNIQUES USED

Technic Used	No. of Cases	Percent
Single Injection		
a. Midline	602	51.1
b. Paramedian	443	37.6
Continuous Block		
a. Midline	78	6.6
b. Paramedian	56	4.7
Total	1179	100

TABLE III. AGENTS USED

Agents	No. of Cases	Percent
Procaine	117	9.9
Pontocaine	214	18.2
Xylocaine	487	41.3
Xylocaine and Pontocaine	361	30.6
Total	1179	100

*Technique Used.*—Anesthesia was produced with a single injection in 88.7 per cent of the patients, while in the rest the continuous technique was used. Many of the continuous blocks were used for relief of postoperative pain, peripheral vascular disease of the lower extremities, and for other therapeutic or diagnostic purposes.

The midline approach was the one most generally used in the lumbar, lower thoracic and cervical region, but in case of difficulty, the paramedian approach was used. In the midthoracic region, where the obliquity of the spinous processes is greatest, the paramedian approach was used for most cases.

*Agents.*—In the early phase of this work, procaine was the agent used for short procedures and pontocaine was used for long operations. Analysis of the cases done with procaine shows that this drug produced anesthesia in twenty to twenty-five

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minutes and the block lasted sixty to seventy-five minutes. With pontocaine the onset of action was longer, being twenty-five to thirty minutes except

other techniques. This is probably due to the fact that since approximately 1 to 2 cc. of solution is distributed in one segment of the peridural

TABLE IV. OPERATIONS PERFORMED WITH PERIDURAL BLOCK

Operation	Number of Cases	Average Site	Average Volume of Drug Injected (cc's)	Extent of Anesthesia	Average Duration of Operation (Minutes)	Failures
Neck						
Thyroidectomy	7	C4	5	C2—C6	87	2
Radical Neck Dissection	4				131	1
Upper Extremity (Bilateral Disease)						
Open Operations	4	C7	8	C4—T2	73	0
Closed Operations	3				36	0
Therapeutic	21				4½ das.	0
Chest						
Mastectomy	22	T5	12	C8—T9	148	3
Cardiac Operations	2	T5	7	T2—T8	173	0
Pulmonary Resection	18	T6	10	T2—T10	203	1
Thoracoplasty	11	T4	11	C8—T7	123	0
Exploratory Thoracotomy	23	T5	10	T2—T9	78	
Therapeutic	39	T5	8	T3—T8	3 days	0
Upper Abdomen						
Cholecystectomy	177	T7	11	T3—T12	95	8
Other Biliary Operations	52					
Gastrectomy	139	T8	12	T3—L1	187	3
Pancreas	7	T8	10	T4—T12	142	
Lower Abdomen						
Intestine	108	T9	12	T5—L1	135	7
Appendectomy	16	T10	12	T7—L4	72	1
Caesarean	27	T11	10	T7—L3	103	1
Gynecology	39	L2	14	T7—S3	88	0
Therapeutic	22	T11	8	T9—L2	2 days	0
Abdominal Wall						
Ventral Hernia	32	T10	12	T7—L2	87	0
Inguinal or Femoral Hernia	209	T12	11	T9—L3	82	9
Lumborenal	31	L1	11	T9—L4	143	0
Back						
Herniated Disc	19	L3	10	T12—S2	71	1
Manipulation of Fracture	8		8		27	0
Lower Extremity						
Open Operations	38	L4	14	T12—S4	141	3
Diagnostic or Therapeutic Block	61	L2	10	T10—L5	5 days	3
Total	1179					43

when using concentrations above 0.3 per cent, in which case it was as short as 2 per cent procaine. The duration of anesthesia with pontocaine was one hundred twenty to one hundred fifty minutes. During the past three years the use of xylocaine has increased the practicability of peridural block considerably because of its quick onset of action and long duration of effects. The 2 per cent solution is the best for it produces complete anesthesia in fifteen to twenty minute and lasts approximately ninety to one hundred twenty minutes.

Frequently we employed a combination of 2 per cent xylocaine and 0.2 per cent pontocaine obtained by adding 20 mgm. of the latter to 10 cc. of 2 per cent xylocaine. With this combination anesthesia frequently lasted as long as one hundred fifty minutes.

It should be noted that with all agents, the anesthesia following single peridural injection is much shorter than anesthesia which results from

space, two intervertebral foramina and the paravertebral spaces, only a very small amount of the anesthetic comes in contact with nerve elements.

*Regions Blocked and Operations Performed with Peridural Block.*—For purposes of clarity the segments which can be anesthetized with peridural block have been divided into five categories—the upper cervical region (C2—C5), the cervico-thoracic region (C5—T2), the upper thoracic region (T1—T6), the lower thoracic region (T6—T12), the thoraco-lumbar region (T10—L5), and the lumbosacral region (L1—S3). The relation of these regions to operations is obvious (Fig. 2).

*Neck Operations.*—Peridural block for thyroidectomy, radical neck dissections, and other neck operations affords the advantage of producing anesthesia with one injection. However, we found this region the most difficult in which to introduce the needle and encountered the highest per cent

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of failures. This was perhaps due to the apprehension which one naturally has about inadvertent subarachnoid injection, which in this region would

*Operations of the Upper Extremity.*—Peridural block can be used to advantage whenever the patient has bilateral disease requiring anesthesia

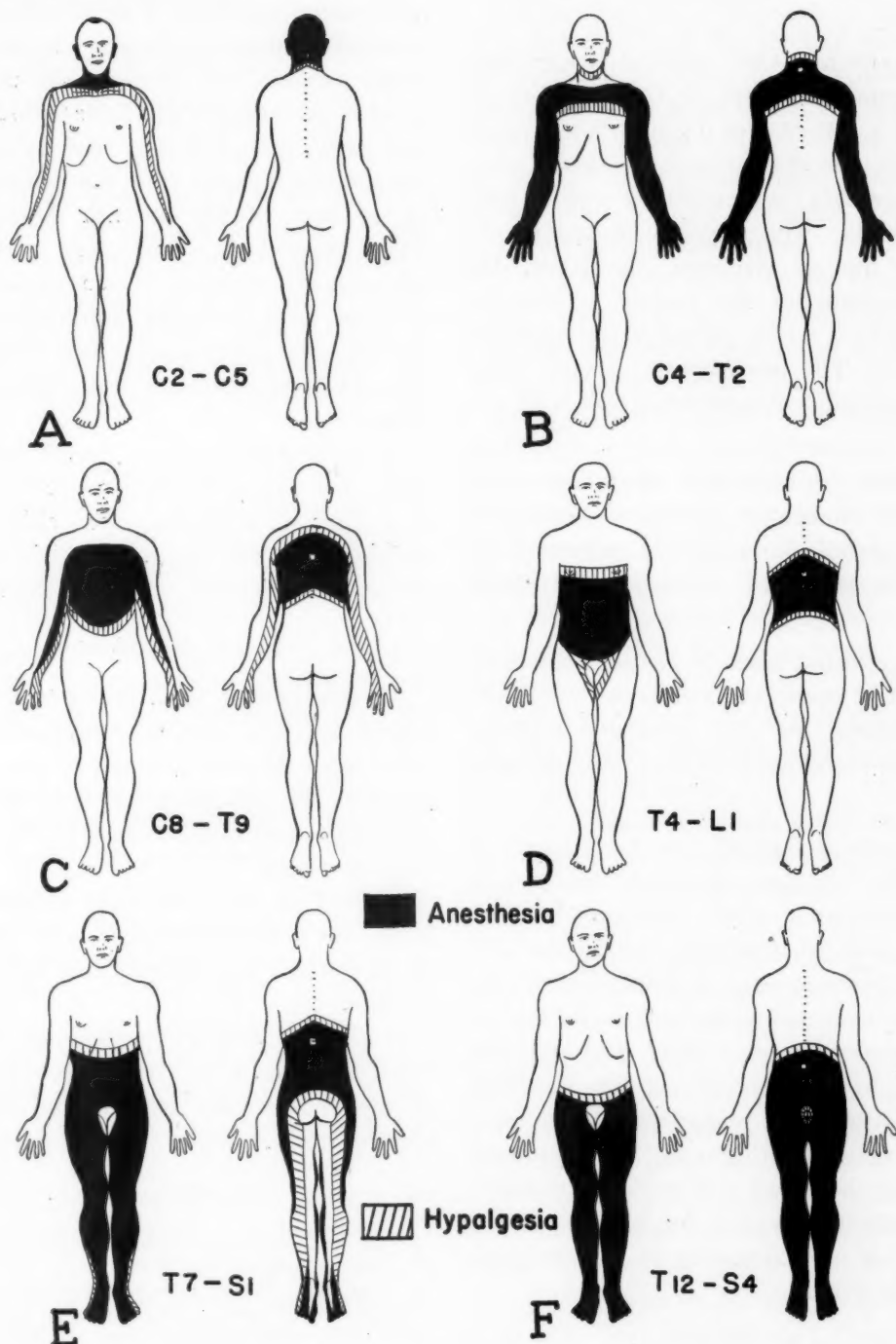


Fig. 2. Area of segmental anesthesia (black) and hypalgesia (cross hatching) following peridural block in various regions of the body. The white spot in the center of the black zone of anesthesia in the posterior views indicates the site of needle puncture. The interspace used is as follows: (A) 3rd cervical, (B) 7th cervical, (C) 4th thoracic, (D) 8th thoracic, (E) 1st lumbar, (F) 4th lumbar. (Bonica, J. J., "The Management of Pain," Philadelphia, Lea & Febiger, 1953).

produce medullary paralysis even though only 4 or 5 cc. of solution are used.

of both extremities. Our results indicate that the puncture is best performed at the seventh cervical

interspace with the patient flexed in the lateral position. As shown in Table IV, injection of 8 cc. usually produces anesthesia of all the nerves which take part in the formation of the brachial plexus.

*Chest Operations.*—Our clinical experiences have corroborated the work of Crawford, et al<sup>4</sup> with peridural anesthesia for intrathoracic surgery. We have no doubts that patients do better when peridural anesthesia is combined with light general anesthesia. The regional procedure obviates reflexes due to periosteal stimulation, the physiologic economy of the patient is less disturbed, and there is a long period of postoperative relief from pain. The two patients operated upon for mitral stenosis did exceptionally well with this combination.

Some of these intrathoracic operations were done with the continuous peridural technique, which was maintained during the postoperative period in order to afford prolonged relief from pain.

Segmental peridural block is an excellent technique for radical mastectomy because the hypotension consequent to the anesthesia reduces significantly the blood loss and the operating time.

*Upper Abdominal Operations.*—As is apparent from Table IV, segmental peridural block finds its greatest usefulness in upper abdominal surgery. Although some state that muscular relaxation with this technique is not as marked as with subarachnoid block, we have not found this to be so. By using 2 per cent xylocaine and/or 0.25 per cent pontocaine we have observed complete muscular relaxation and very quiet operating fields in most cases. This, combined with the fact that the lower extremities and the rectal and vesical sphincters remain unanesthetized, makes for ideal operating conditions and is very appealing to surgeons and anesthesiologists alike.

*Other Operations.*—Peridural block is especially advantageous in Caesarean operations; herniorrhaphies, both ventral and inguinal; lumborectal surgery, and operations on spinal column and the lower extremities because the zone of anesthesia is more limited. We have found this procedure particularly useful for chordotomies, in which case the segmental anesthesia does not interfere with

testing of sensation in the unanesthetized lower extremities, perineum, and lower part of the trunk.

*Complications and Failures.*—Mild to moderate hypotension occurred in most patients undergoing thoracic or upper abdominal operations. This was either treated with vasopressors or intentionally ignored in order to minimize blood loss. In one patient 10 cc. of 2 per cent xylocaine was inadvertently injected into the subarachnoid space at the level of the eleventh thoracic interspace. This resulted in respiratory paralysis, severe hypotension, and loss of consciousness. Prompt artificial respiration, the administration of fluids, and 50 mgm. of ephedrine corrected these alterations and the operation was performed uneventfully.

In forty-three patients, or 3.6 per cent of the cases, anesthesia was inadequate for the proposed operation. It is obvious that although this procedure is at first technically difficult, it can be mastered by anyone who is persistent in doing it.

### Summary

A technique of segmental peridural block, together with the possible complication which can occur with this method, have been described. In addition, the indication and contraindications and advantages and disadvantages of this method have been discussed.

An analysis of 1,179 cases in which peridural block was used is presented. The results obtained in these cases re-emphasize the usefulness of this method.

It is hoped that this presentation will stimulate those clinicians, who have not yet taken advantage of the benefits that can be derived from it, to employ this technique in their daily practice.

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# Subarachnoid Hemorrhage with Special Emphasis on Its Management

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THE CONFUSION, or perhaps more correctly, the differences in opinion apparent in the literature relative to subarachnoid hemorrhage would in itself justify an attempted delineation of the problem. That it represents a serious one, and all too frequently is a threat to life, is at once apparent to one who has repeated experiences with the condition.

A rather marked element of vacillation continues to exist relative to a logical approach to a given situation in an attempt to evaluate a specific case, both as to the procedure of choice and the time at which it should be done.

It should be pointed out at the beginning that subarachnoid hemorrhage is a symptom and sign of disease and does not by itself represent a disease entity.

To review briefly, the general characteristics of the condition, the onset of the attack of bleeding, is practically always acute. Sudden headache, frequently in the back of the head, and of varying intensity but commonly excruciating, is the rule. This is followed by a disturbance in consciousness, varying from some lack of awareness to complete coma and prostration. Associated nausea and vomiting is not uncommon. Other signs, as a result of the blood in the cerebrospinal fluid, are usually apparent even to the casual observer. An aseptic meningitis perpetuates the headache for several days, produces nuchal rigidity of some degree with backache, discomfort in the lower extremities, a positive brudzinski's sign, frequently a positive bilateral babinski reaction, and a febrile response, all of which recede within a few days if the patient survives and has no further episodes of bleeding. A lumbar puncture establishes the presence of a grossly bloody spinal fluid, usually under some increase in pressure.

In the absence of trauma, as the obvious underlying cause for the blood in the spinal fluid a number of different types of lesions must necessarily be considered, many of which will not be obvious on

clinical grounds alone. Brief mention should be made of some of the known causes of subarachnoid bleeding, exclusive of trauma, listed perhaps in the order of their relative frequency.

1. Aneurysms of the cerebral vessels, either in the region of the circle of willis or elsewhere, are undoubtedly the most common cause.

2. Arteriovenous fistulae located on the cortex not uncommonly manifest themselves only by repeated episodes of subarachnoid bleeding without other associated phenomena.

3. Intracortical hematoma occurring spontaneously from cerebrovascular disease of any nature may show the presence of blood in the spinal fluid during the acute phase.

4. Brain tumor, while not a common source of bloody spinal fluid, nevertheless deserves consideration, particularly when it occurs on the surface in some area permitting spontaneous bleeding into the subarachnoid space from the rupture of a thin-walled vessel or from the erosion of one.

5. Blood dyscrasias are on occasion manifest sometime during their course by subarachnoid bleeding.

6. Subarachnoid bleeding of spinal origin from vascular lesions within the spinal canal have been occasionally observed.

7. Last, there are those cases which defy, even with a battery of tests, the location of any lesion as being the responsible source.

Consideration relative to the management of lesions responsible for subarachnoid bleeding are obviously manifold. The first concern is the early determination of the nature of the responsible source of the bleeding and its accurate location.

Some remarks should be made relative to the differential diagnosis of these listed lesions and it is perhaps better to deal with them in reverse order, leaving until last the major contender. Bloody spinal fluid, usually under some increase in pressure, is common to all.

It is at once obvious that those lesions which defy determination of their nature and location, even by the use of specialized techniques, must of necessity be managed in an entirely conservative fashion. This entails prolonged periods of absolute bed rest, the control of intracranial hypertension when it exists in an embarrassing degree by the removal of spinal fluid, sufficient analgesics and hypnotics to control pain and restlessness, the

avoidance of enemata with the attendant straining and possible consequent rise in blood pressure which may accompany it and thus provoke additional bleeding.

Vascular intraspinal lesions, as a rule, are manifest by few, if any, cerebral symptoms with the major signs being referable to the spinal cord and spinal nerves, particularly as pertain to the lower extremities. Some degree of subarachnoid block may be present as determined by the queckenstedt test, or more specifically by a myelographic examination. Employment of the queckenstedt test in cases of intracranial bleeding would, of course, be contraindicated and uninformative. No one in this class of case, would seriously entertain a conservative program once the nature and location of the lesion had been determined, and particularly when there was evidence of interference of cord function. This would dictate an early laminectomy with surgical removal of the offending process, the control of hemorrhage, and decompression of the cord structures.

Blood dyscrasia should be readily recognized with a hemogram and the usual measures employed in their attempted management. In these instances it is the disease entity, as a rule, which has to be managed rather than the cerebral complication.

Brain tumor can frequently be suspicioned on the basis of some antecedent history, the presence of choked discs, and the association of a major neurological deficit in the face of a persisting intracranial hypertension. Ventricular air studies revealing ventricular distortion or shift indicative of a mass lesion are added proof. Since brain tumors do not lend themselves to a conservative regime, the treatment of these, of course, is early surgical removal of the tumor mass.

The spontaneously occurring intracortical hematomata may be difficult, if not impossible, to differentiate from a cerebral tumor in a relatively silent area, particularly when complicated by a hemorrhage into its substance. This condition is no respecter of age. This likewise in many instances does not lend itself to a conservative regime and when it is of sufficient size to produce neurological findings, in association with a persisting intracranial hypertension, it entails a craniotomy and removal of the clot with control of the bleeding after accurate localization has been established usually through the means of cerebral arteriograms or ventriculograms. They have, in addition to bloody

spinal fluid, persisting intracranial pressure and the signs of a space occupying intracranial lesion with persisting coma, weakness, paralysis, and usually reflex changes.

Arteriovenous fistulae constitute a serious problem. Their location is usually only evident by arteriographic studies with contrast material, such as 35 per cent diodrast injected into the carotid artery. There seems to be little, if anything, of a conservative nature which has proved effective. X-ray therapy in the hopes of producing a fibrosis has been tried in the past and seemingly largely discarded because of its apparent ineffectiveness. Whether or not a direct attack upon the lesion through the medium of a craniotomy is feasible or advisable in a given case in an attempt to clip the major contributing vessel, coagulate the major mass of vessels, or surgically extirpate the anomaly is dependent upon many factors. Attention and careful consideration should be given to its location, extent, relation to important cortical areas, and the extent of collateral circulation. While it is possible to totally remove some, the removal or attempted removal of others may frequently result in the sacrifice of the patient or leave him with a disabling neurological deficit. There is little, if any, reason for generalities and the decision as to the management of the individual case in this category must be carefully weighed in the light of the available facts. The use of the newer types of hypotensive drugs in conjunction with anesthesia seems to offer a greater promise than heretofore in surgically dealing with these lesions where the control of operative hemorrhage is a major factor.

To one who has accumulated experience in dealing with aneurysms of the intracranial vessels, there is considerable reluctance in accepting recent statements in the literature to the effect that most patients with spontaneous subarachnoid hemorrhage recover without surgical treatment. My own experience dictates otherwise, and in some clinics it is considered almost a surgical emergency.

A fairly high percentage of patients with ruptured aneurysms have succumbed to their first attack within a few hours. Nothing, of course, can be done for these, except possible supportive measures. All too frequently, however, in those who are seemingly surviving the initial episode, sudden death will occur from a second attack within days of the first. Others have survived many attacks. The difficulty and, of course, the impossibility of

individually predicting this eventuality is inherent in the problem and lies in the realm of speculation. Aneurysms in the region of the circle of willis, not uncommonly in addition to subarachnoid bleeding, manifest themselves by the implication of certain cranial nerves. In the anteriorly placed lesions, the most common of these is the third cranial nerve with a dilated pupil, external deviation of the involved eye, paralysis of upward, downward, and internal movement, and a drooping of the upper eyelid or a complete ptosis. The second most common is the sixth cranial nerve as manifest by an internal deviation of the eye and a weakness or paralysis of lateral gaze. In the case of involvement of either of these nerves there will be a resulting diplopia or double vision, except when the ptosis is complete and so that no vision is possible from the involved side unless the lid be passively raised to permit it. These nerves, when implicated, are important focal signs relative to the location of the lesion. Other cranial nerves in the vast majority of uncomplicated cases are notoriously spared and sensory and motor signs are conspicuous by their absence.

It must be remembered however, that thromboses of major vessels can accompany a ruptured aneurysm and thereby complicate the picture by producing such gross neurological changes as hemiplegia. Equally true, an aneurysm may not only bleed into the subarachnoid space but by jet force at the time of rupture force its way into the brain tissue as well with the formation of an intracerebral hematoma, and thus one is confronted with two highly significant conditions, even though one is a result of the other.

In my own experience I have not infrequently seen subdural hematoma of clinical proportions associated with intracranial aneurysms and entirely unsuspected until the time of operation or discovered at postmortem examination. They only add further to the complexities of the management.

Any approach to the case in an acute attack of subarachnoid bleeding due to intracranial aneurysm should dictate some order of procedure. A lumbar puncture will reveal the bloody fluid and also the degree of associated intracranial hypertension. If the spinal pressure is unduly high or particularly if the cardiac or respiratory mechanisms seem to be suffering, the pressure should be reduced to a more nearly normal level by fluid

removal. This, of course, can be repeated as indicated by the patient's general condition.

A critical neurological examination should be made frequently for evidence of focal signs.

Absolute bed rest, as in the unidentified case, with the use of hypnotics and analgesics for the control of pain and restlessness to avoid fluctuations in blood pressure, are practically always necessary and indicated in an effort to prevent continued or recurrent bleeding.

Likewise the use of the enema at any time during the acute phase because of the straining and consequent rise in blood pressure which may accompany it and provoke additional bleeding is contraindicated.

Practically every case of suspected intracranial aneurysm should have a contrast arteriographic study as early as the patient's general condition will permit. Recent experience has shown that this procedure is reasonably safe when carried out in the acute phase. This is the only way in which an aneurysmal type of lesion can be adequately surveyed from the standpoint of the vessel involved as well as the size, shape, and location of the sac. Only then can one decide upon the course of action appropriate for the lesion at hand. Bilateral carotid arteriograms should be done because of the possibility of a bilateral lesion. X-rays should be made in both anteroposterior and lateral projections and when possible stereoscopically. Since approximately two-thirds of the intracranial aneurysms involve the anterior portion of the circle of willis in some of its parts, vertebral arteriograms are less often necessary and the lesions, when demonstrated, are more often inaccessible.

The ideal objective of treatment of an intracranial aneurysm should be to eliminate the aneurysm and preserve or leave intact the circulation. This is not always possible for a variety of reasons. Because of this, other procedures have been widely advocated.

There are those who feel that ligation of the common or internal carotid arteries in the neck is an effective procedure from the standpoint of reducing the pressure and diminishing pulsatile flow in the region of the damaged area. The reason for this, of course, being to prevent further bleeding and to permit fibrosis and healing. Some have advocated this on an empirical basis only while others have supported their premise with arterial pressure measurements in the neck distal to the point of ligation where an acute reduction

in pressure has been routinely observed. This has given further popularity to the procedure.

Differences in data and opinion exist as to how long the reduction in pressure is maintained after carotid artery ligation in the neck. My own experience, with both the acute and chronic pressure measurements, indicates a rather prompt return of the pressure to nearly its original level, thereby casting doubt on the efficacy of this procedure alone. Additional data, relative to pressure determinations from the chronic standpoint and pertinent to the individual case, is necessary before valid and warranted conclusions are in order. Some patients, of course, will not tolerate carotid artery ligation without producing hemiplegia and whether or not this is likely to happen should be ascertained if possible in advance.

Later the trapping operation devised by Dandy entailing ligation of the carotid artery in the neck and clipping of the involved vessel intracranially distal to the aneurysm was and continues to be extensively employed. The lesion with this method was thought to be left in an isolated stagnant area of the circulation and thereby rendered incapable of further bleeding. However, information relative to anastomotic relationships between the external and internal carotid systems of the same side, and between the two sides, has apparently not been too seriously considered. Recent data by Woodall and some personal experience shows that a significant degree of pressure is evident in the isolated segment despite the trapping. Whether or not it is usually effective in preventing repeated episodes of hemorrhage will have to wait a more critical analysis of cases and a further lapse

of time. There are some cases which will of necessity lend themselves to this procedure alone because of the impossibility of doing anything else.

The direct intracranial approach to the aneurysm, when accessible, in an attempt to clip or ligate it at the base, more nearly realizes the objective but is unfortunately attended by a greater risk. Manipulation of the sac incident to the ligation may result in rupture with serious hemorrhage difficult to control and the operator may be forced in a life and death struggle to ligate a major vessel with the inevitable consequences. The risk, however, must be assumed. Again the use of the newer hypotensive technique, such as hexamethonium bromide, seems to offer considerable promise in obviating this difficulty. Associated subdural or intracerebral hematomata have to be dealt with surgically in addition to the aneurysm. In one instance in my own experience all three conditions were present in the same case.

In summary then a brief outline of the clinical picture of subarachnoid hemorrhage is presented. The types of lesions known to be the responsible source are listed with mention of associated complicating factors. Some comment is made on the proposed management of each. The importance of pressure determinations in individual cases is mentioned.

In conclusion, on the basis of available information few, if any, generalities are warranted. Each case must be judged from the standpoint of management on such merits as the nature of the lesion, its location, accessibility, and type of procedure best equipped to handle the specific problem.

1304 Hanna Building

## A PHYSICIAN'S OBLIGATION TO THE COURTS

(Continued from Page 161)

nesses for the information of the court, to testify regarding the technical matters at issue, and would be paid for as part of the general expenses of the trial. In addition, it would be of further help if the English custom were adopted in which the court itself is free to take over the witness for further questioning.

Under such a system neutral expert witnesses of high qualification would be available to inform the Court on technical matters, particularly when markedly diverging opinions had been expressed. Furthermore, such a system would have the indi-

rect effect that opposing attorneys would be more likely, in calling expert witnesses of their own, to select someone known to be on the panel, rather than one who, for one reason or another, had not been so designated. This would tend greatly to improve the quality of all expert testimony, to the benefit of court procedure on the one hand, and on the other, to increase the esteem of the public for such technical testimony—which last, unfortunately under present practice, has often fallen to a low ebb.

10 Peterboro Street

# Weight Gain through Sedation in Malnourished Children

By Mario S. Cioffari, M.D.

Detroit, Michigan

**A**SIDE FROM the acute conditions, malnutrition is one of the commonest reasons for bringing a child to the pediatrician. The causes may be numerous, or difficult to find, and no single method of treatment applies. There are many with complaints of poor appetite and malnutrition, who, on physical examination, are actually well nourished. Nothing is done for these except some general directions about psychology at meal times. The ones we are really concerned with are those who measure 10 per cent or more under the average weight<sup>3</sup> and have not been able to gain. This study was conducted in an effort to improve the latter group.

Taking a general view of the situation, most of the malnourished children seemed to fit into the anxiety type, and working on this idea, it was decided to try a bitter-sweet sedative before meals, to get both the appetizer and the quieting effect at meal times. All barbiturates in solution are bitter; pentobarbital, however, in the form of Elixir of Nembutal,<sup>®\*</sup> seemed to be acceptable to the children, and to fill the bill.

In this study, one-half teaspoon of the elixir, containing  $\frac{1}{8}$  gr. of nembutal sodium, was given three times daily to the smaller children, and one teaspoon, containing one-quarter grain, to the older ones, from about seven to eight years of age upward; larger doses defeat their purpose because of drowsiness. In the group under observation, the majority of the children did very well, and the results are tabulated in Table I and II.

Analyzing the above tables: out of forty children in this study, 92.5 per cent had improved appetites, and gained anywhere from one to six pounds, for an average of two pounds per person, and at an average rate of two pounds per month. The remainder, 7.5 per cent, showed no gain and questionable improvement in appetite. There was no apparent difference in results between the sexes.

\*Abbott and Company.

TABLE I. RATE OF GAIN

	Male	Female
3 lb./wk.	1	
2 lb./wk.		2
1 lb./wk.	5	5
2 lb./mo.	5	5
1 lb./mo.	7	7
No gain	1	2
Totals	19	21

TABLE II. TOTAL GAINS

	Male	Female
6 lb.	1	1
5 lb.		1
4 lb.	1	
3 lb.	2	3
2 lb.	7	7
1 lb.	7	7
No gain	1	2

## Comments

These children had all been checked for anemia, had tuberculin tests and urinalyses, and were all getting adequate vitamins. Some of the mothers had tried different brands of vitamins, and some were giving two to three times the average dose, with no apparent benefit. It was found that when starting vitamins, the appetite may increase in underweight children, but usually levels off later,<sup>5</sup> while in those with good appetites, and good nutrition, the increased appetite will continue.

The majority of the children in this study were of the anxiety type, small boned, nervous, jittery, sensitive and continually under tension; they were easily upset and afraid of everything new and different. This tension destroys appetite or disturbs their metabolism, and they do not get full benefit out of what they do eat. Some sensitive older children may deny themselves food as a self-punishment for a guilt-feeling.<sup>4</sup> Because of this type of constitutional make-up, they may continually suffer from this sense of guilt about trivial details, so that their appetite is always interfered with. Even in the matter of eating and appetite, one is guided by feelings and not by logic.<sup>2</sup>

From the first day on, the mother usually noticed the sedative effect, and the improvement in appetite; from a hyperkinetic behavior, the child became more normal in reactions to his environment. In some, no difference was noted in the amount eaten, but the child gained anyway, apparently getting more benefit out of his food.

We found one important factor which was very difficult to overcome, and that is the type of family constitution. If that is asthenic on both sides, any measure of success with the child will be a

struggle. These children may put away enormous quantities of food and still show no gain.

Those who improved the most, usually gained rapidly from the beginning, and contrariwise, those who gained poorly, continued the same rate or stopped early. The medication was stopped when the child showed no further gains, or minimal ones. It may have been coincidental, but most stopped improving as they approximated their average weight.

One of the impressions gathered from this study was that if a malnourished child succeeds in passing a certain critical point in weight, he will not only maintain his average weight, but sometimes will continue to gain and may actually become fat. Patients in anxiety states were found to have increased glucose tolerance,<sup>1</sup> but with better nutrition, most of the anxiety goes, they acquire a better outlook on life, and their metabolism becomes adjusted to the new conditions.

#### Summary and Conclusions

1. Forty malnourished children received  $\frac{1}{4}$  to  $\frac{1}{8}$  gr. of pentobarbital, in the form of Elixir of

Nembutal, three times daily before meals.

2. Of this number, 92.5 per cent ate much better and gained from one to six pounds during the period of observation, at rates varying from one pound per month to three pounds per week; 7.5 per cent showed no gain and insignificant changes in appetite.

3. Pentobarbital, in the method used here, is a useful adjunct in the treatment of malnutrition in children. It seems to be of special benefit where no physical causes can be found.

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#### DON'T KILL YOUR DOCTOR!

Suppose you're a doctor. Just as you are about to climb into bed, the 'phone rings. One of your patients has taken a turn for the worse. You answer the call: you know it's serious.

Ninety minutes or so later you drag home only to find that another call has come—to tell you that Mrs. X is having her baby. That develops into a siege which robs you of a night's sleep; you might, if you are fortunate, get as much as an hour before facing your regular daily round of hospital calls and an office full of sick people.

It can go on like that until every nerve in your body is screaming for sleep. Then one night a total stranger, Mary Jones, calls: "My baby is dying, Doctor! You've got to come!"

What do you do? You don't know the woman—maybe the baby really is sick. So you ask, "Who is your regular doctor, Mrs. Jones?"

The pause is significant. "Well, I've had Dr. A. a couple of times, but I don't care for him."

"Did you call him tonight?"

"No."

So you feel that perhaps Dr. A. knows Mrs. Jones as one of those hysterical night callers. You, tired, longing for sleep that has been denied for days and even weeks, what do you do?

You know from experience it's a good chance that if you go, you'll find Mrs. Jones with only a mildly ill baby, that possibly the reason she doesn't like Dr. A. is that he went the first time and discovered the baby only slightly ill, and that Mrs. Jones merely had worked herself into a state. Subsequently, Dr. A. had suggested that Mrs. Jones bring the baby around to the office the next time—in the morning.

But suppose you don't go and the baby dies? It has

happened; it's the old story of "Wolf, wolf!" and just as in the old story there sometimes comes a real wolf.

How are you, the doctor, going to protect yourself from the false wolves? How are we, the public, going to protect ourselves when the wolf is real?

The answer is that both can be protected if you, as a patient, will follow these six rules:

1. Choose a doctor in whom you have confidence and stick with him. All doctors have a reasonable degree of competence, else they could not have passed their medical-school examination. Your physician, if he knows you, will know whether a 2 A.M. call is justified.

2. See the doctor at his home or office during regular hours if you possibly can. Treatment facilities are better there, and he shouldn't be forced to work under any more handicaps than absolutely necessary.

3. Emergencies aside, when one of your family is ill, call your physician between 6 and 8 P.M. Don't wait until 3 A.M.

4. If you need a doctor in an emergency and you don't have a regular physician, don't go down the list of physicians in the 'phone book and call them one after another. You will have greater success if you (1) use the special number set up by 400 county medical societies to take emergency calls, (2) call the operator, or (3) call the nearest hospital and ask for the name of a physician who would be available.

5. If you must call the doctor in the small hours, don't insist that it's an emergency. Describe the situation calmly and let the doctor decide.

6. Finally, if you look on each minor illness as a major crisis, don't blame the doctor if he thinks you are calling "wolf" when you need him most.

—JAY CARROLL in *The Rotarian*, December, 1953

## William Stewart Halsted

By Alexander Blain, III, M.D.

Detroit, Michigan

EVERY PAPER I have seen or speech I have heard about the life of Dr. William Stewart Halsted, America's foremost surgeon, has been written by some distinguished pupil, colleague or friend of this eminent scholar. The risk of my seeming presumptuous in undertaking a discussion of his life and work is a calculated risk and has been assumed for the following reasons: First, 1952 has been celebrated throughout the entire surgical world as the centennial year of Halsted's birth and this seems the most appropriate time for us to participate in his celebration. Second, Halsted's stature is such that he belongs to all time, and the time for his accomplishments to be evaluated by members of a newer generation, men who were not his close associates, is at hand. Third, while I can make no claim to being a member of the Halsted School of Surgery, I have been intensely interested in his life for some time. While not a graduate of the Johns Hopkins University School of Medicine, the school with which his name will ever be associated, it was my good fortune to have worked, at the beginning of my professional life, for some three years, under the influence of those who knew him well in the institution to whose name he brought such fame.

These three years began with an internship at the Johns Hopkins Hospital under the direction of two of Halsted's most brilliant pupils, Hugh Hampton Young, urologist, and Walter Dandy, neurosurgeon. This period was followed by a year as assistant pathologist, under Dr. Arnold Rich, the successor of Welch and of MacCallum to one of the most distinguished chairs of pathology in the United States. Finally, there was the year (1945-46) of tenure of the William Stewart Halsted Fellowship in surgery under the direction of Halsted's brilliant successor, Dr. Alfred Blalock. During these years, there was stimulating contact also with Drs. William Rienhoff, Harvey Stone, Warfield Fier and others of the Halsted school. Further, there had been an opportunity to know, at least

From the Department of Surgery, Alexander Blain Hospital. Presented at a meeting of the Prismatic Club, Detroit, December 31, 1952.

casually, McClure of Detroit, Holman of San Francisco, Davis and Crowe of Baltimore and a few other leading American surgeons, themselves products of Halsted's teaching.

Of the Halsted Fellowship in Surgery, the President of the Johns Hopkins University, Frank J. Goodnow, stated at Halsted's death in 1922, "It is only characteristic of the man that when he died he not only left us the lustre of a name that will always be honored by Hopkins men, but as well made the University his residuary legatee in order to enable it more adequately to carry on the work which he had so auspiciously begun, namely, research in surgery." To which Dr. Blalock added, "I am sure Halsted would be pleased that recipients of the Halsted Fellowship have made significant contributions to surgery."<sup>1</sup>

My good fortune continued, and after leaving Baltimore, I was able to complete my training under the direction of one of this country's leading surgeons, Dr. Frederick A. Collier, professor of surgery at the University of Michigan. Interest in the life of Halsted had continued, however, to the extent that I have become familiar with all of his publications, many of them outstanding models of medical writing and research.

With the foregoing statements by way of explanation, and if you wish, apology, for the temerity of this presentation, we shall consider some of the aspects of Halsted's life, his contribution to surgery and also, certain controversial subjects regarding his originality, surgical technique and drug addiction. It should be stated clearly that the material to be presented is based on no first-hand knowledge, and that no implication is intended that something new or original is being contributed. I have borrowed, with complete lack of restraint, from the writings of Halsted himself and from the writings of his colleagues and pupils.

### Background and Early Years

William Stewart Halsted was born in New York, September 23, 1852. His family who came to America in 1660, can be traced back to the sixteenth century in England, where it occupied an estate in Rowley Parish called High Halsted. William Stewart was born into an atmosphere of wealth and luxury, and during his first ten years appears to have been taught at home by a governess. He graduated from Andover in 1869 and from Yale in 1874. While at Yale, his chief interest seems to have been in athletics, particularly

football, crew, wrestling and boxing. In his senior year he was captain of the football team that played against Columbia, November 16, 1873. His classmates agreed that he could have easily stood in the first division of his class had he been more interested in his studies. He was a member of Psi Upsilon and while a good dancer, is said not to have gone in much for social activities. He was generally popular with the student body, and was even then, careful in matters of dress. He did not drink and was at least moderately interested in medicine. In his senior year he purchased a copy of Gray's Anatomy and of Dalton's Physiology which he studied with care.

After his graduation from Yale, he entered the College of Physicians and Surgeons in New York and in 1876 passed the examinations for internship at Bellevue Hospital. According to Heuer's monograph on Halsted,<sup>7</sup> there were ninety-five patients admitted between October 1, 1876 and May 1, 1877 to the service on which Dr. Halsted was an intern. "An analysis of the conditions for which these patients were admitted shows that fifty were simple fractures or dislocations, four were compound fractures, eight gunshot, pistol or stab wounds, ten other wounds, burns or frostbite, eight urological conditions, two skull fractures, two synovitis of the knee joint, four simple rectal conditions, and one painful amputation stump and one cancer of the breast. The last was treated by simple mastectomy."<sup>7</sup> In the Spring of 1877, he received his M.D. degree and within the next year he became acquainted with William H. Welch, an event which was to profoundly influence his life. Welch had just returned from Germany where he had been working in the laboratories of Julius Cohnheim and others. Halsted soon followed his example and sailed for Europe to study the basic sciences. At that time, the dawn of medical science was making its appearance in Germany, Austria and elsewhere. In America, there was not only not the medical leadership that exists today, but medical education was in a rudimentary and deplorable state.

"There were many medical schools, none of university caliber, and all proprietary, whereas there were about twenty university medical schools in Germany. About this time Johns Hopkins, a Baltimore merchant and banker, left his fortune for the establishment of a university and hospital, the latter to be a part of the medical school of the university, for which he had made ample provision in his will. The carefully chosen Boards of

Trustees of the two institutions selected Daniel C. Gilman as President of the University, John Shaw Billings as Medical Advisor and William H. Welch as Dean of the Medical Faculty and Professor of Pathology. These appointments need no defense, for they resulted in the establishment of one of the first important schools of postgraduate study in the United States. Gilman, in particular, revealed a remarkable ability to choose outstanding young men. The faculty in 1901 was one of the most distinguished faculty groups ever gathered together in a single university, and it is particularly significant that this was when a young school with a small faculty."<sup>1</sup>

In Europe, Halsted spent two years which later proved of inestimable value to the future of surgery in the United States. Among other studies, he attended courses in pathology with Chiari, in diseases of the skin with Kaposi and in anatomy with Zuckerhandl. He also attended the surgical clinics of Billroth and Braun. He was greatly impressed by the magnitude of the operations and by the surgical skill of Billroth and his assistants, particularly Mikulicz. At that time, Billroth had not yet performed his first resection of the stomach and Halsted did not recall seeing any operation for goiter, operations for which Billroth was later to become famous. In the Spring of 1879, Halsted left Vienna for Wurzburg where he attended the surgical clinics of von Bergmann. Later he visited Leipzig and Halle where he spent several profitable weeks with Volkmann. He then went to Hamburg where he saw Schede, and to Kiel where Esmarch was active. Among the older great surgeons whose work he studied during this period were Thiersch and Woelfler.

Thus, from an early training, narrow in scope, Halsted had received by this period of European study an insight into the limitless boundaries of surgery as being developed abroad under the impetus of antiseptic techniques, progress in anatomy, physiology, embryology, pathology and bacteriology and specialization in investigation and practice. Koenig writing in 1877, says:

"With joy we see how our attitude toward the patient has changed. Heart and hand are no longer tied by the fear that operation may be fatal through accidental infection.

"The coming generation will perhaps know only from the records of long past times of the doubts and difficulties of surgeons as to whether this danger may not be so great as to forbid the healing operation. It is Joseph Lister who has set us free from this fear and allowed us to extend our operative activity in an undreamed of way."

To illustrate the contrast between surgery as it was practiced at this time in Austria and Germany and as it was being practiced in this country, Halsted upon returning to New York to work with Sands, ordered a full dozen artery clamps for use in surgical operations. This seemed extravagant to Sands who asked, "What shall we do with so many?"

### The New York Period

In 1881, he was appointed surgeon to the Charity Hospital on Blackwell's Island and there followed many other similar appointments, including that of Chief Surgeon to the Emigrants Hospital on Ward's Island, his appointment to the surgical staff of the Presbyterian Hospital and Bellevue Hospital. This period has been covered in a recent communication by Dr. Allen O. Whipple and for our purposes probably its chief features include, his developing an outstanding reputation as a quizzmaster and a fast, bold and prodigious operator, his contact with Welch, his discovery of regional nerve block anesthesia and his resulting addiction to cocaine. This period was characterized by a tremendous enthusiasm for his work, amazing energy, strength and endurance.

"Regular hours of teaching in the dissecting rooms of the college, a quiz of sixty-five or more students at his house, daily attendance in the morning at the Roosevelt Hospital Dispensary, services at Bellevue Hospital, Presbyterian Hospital, Charity Hospital, Emigrant Hospital and Chambers Street Hospital, in all of which he was active on the wards and in the operating rooms, day or night. This forms a schedule of work which only a man of boundless enthusiasm and amazing strength could have encompassed in twenty-four hours."<sup>7</sup>

In addition to this, he found time for original work, and in 1884 following Kaller's announcement at the Heidelberg Ophthalmic Congress that the newly discovered drug, cocaine, would render insensitive the conjunctiva and cornea of the eye, Halsted immediately began to study this drug as a local anesthetic for surgical operations. He, together with his associates, Richard Hall and Frank Huntley, in all innocence, used cocaine not only in numerous operations but experimentally upon themselves. The tragic personal consequence of this study is now well known. Halsted and some of his associates became cocaine addicts.

There are two great controversies about this study. The first concerns itself with Halsted's priority as the discoverer of nerve block anesthesia

and the second concerns the question of whether Halsted ever conquered his addiction. For the sake of brevity, it can be stated that Halsted was proved to have priority in this discovery. The interested reader is referred to the fascinating aspects of this proof in the two papers by his friend, Rudolph Matas.<sup>11,12</sup>

"Barely six months before Halsted's death, the fundamental importance and significance of his great discoveries in local and regional anesthesia were duly recognized by the American National Dental Association. After the painstaking investigation of a committee headed by the distinguished dentist, Dr. E. Edmund Kells of New Orleans, this representative body presented him with a beautifully designed gold medal which gave him full credit as the originator of the method of neuroregional anesthesia which has proven of such incalculable service in oral and dental surgery."<sup>11</sup>

As a result of this contribution a general law was formulated, which can well be called "Halsted's Law," namely, that the infiltration of a sectional area of a sensory nerve trunk or path, with an analgesic substance, is equal to the anesthesia of its peripheral distribution. This is in essence, the very foundation of all the present and most useful method of regional anesthesia.<sup>11</sup>

The final answer to the cocaine addiction controversy carries so much emotional impact that Heuer's monograph on Halsted was almost never completed. Heuer was so anxious to find unquestionable proof that Halsted had conquered the habit, and the proof was not forthcoming, that he delayed its publication for many years. MacCallum<sup>10</sup> and most of Halsted's closest associates believed that Halsted had conquered his addiction. There were a few who believed otherwise, including a well-known surgeon who during a discussion of MacCallum's biography of Halsted pointed out:

"The very abrupt change in Halsted's nature when he moved from New York to Baltimore; that he had been a vigorous, rather showy, didactic, bustling individual; that he became a very refined and most punctilious and fastidious individual. In the interim, between New York and Baltimore, he acquired the cocaine habit. The real truth of the matter is, he never conquered it. There are several proofs of this and perhaps MacCallum should have faced it, for he must have known it and should have published it in his book, for it would have been a wonderful story of a person who, like DeQuincey, carried a pernicious habit to old age and death unbeknownst to the rest of the world."

It is a question whether a man could have over a period of time, constantly taken the drug without

suffering the marked deleterious effects upon mind and body the drug is known to produce. Such effects were not present, for until his death in 1922, Halsted's mind was as keen and alert and his interest in surgical problems as intense as ever.

Of all that has been said on this subject, the most pertinent was said recently by Margaret Boise, R.N., Halsted's anesthetist, who stated that all known facts should be related and that it is for the individual reader to judge for himself which road Halsted followed: "The courageous and victorious fight against the enemy, or the equally courageous thirty years of fruitful activity with the haunting enemy always at hand."<sup>2</sup>

### Baltimore

Following more than a year of disability (due to the use of cocaine), during a part of which he was hospitalized in Rhode Island, Halsted joined his close friend, Welch, who had assumed his duties as Dean and Professor of Pathology at Johns Hopkins. The hospital and medical school had not yet been built, but there was a laboratory of pathology in which Welch had gathered together a group of brilliant young men, including Mall, Councilman, Nuttall, Walter Reed, Abbott and Flexner.

As Blalock has stated, the time and conditions were ideal for a person of Halsted's ability, interests and training. According to Councilman, later Professor of Pathology at Harvard, Halsted repeated many of Lister's experiments and found that cultures made of wounds after the most meticulous observance of the Lister methods still showed the presence of bacteria. Councilman said:

"This led to a careful microscopic study of wounds and the realization that care in operating, the exact approximation of surfaces and the avoidance of dead spaces was as important for the results as the supposed avoidance of bacteria—the study of hand disinfection was no less thorough and this led to the realization that the hands could not be sterilized, and finally to the use of rubber gloves in operating."<sup>1</sup>

The Johns Hopkins Hospital was opened in 1889, and Macewen of Glasgow was offered the position of Surgeon-in-Chief. After the position was declined by Macewen, Halsted was appointed. Because the hospital was opened several years before the medical school, and because of the staff's interest in teaching as well as in research, an excellent system of postgraduate education was developed, the residency system. Welch said:

"Here Halsted, first in America, created a genuine school of surgery. He shares with Osler and with Kelly the credit of organizing the clinical services according to a plan whereby it was rendered possible for the young resident surgeons and physicians, appointed on indefinite tenure, to be trained during long periods of time for the higher academic and professional careers."

In the opinion of many, the greatest contribution of the Johns Hopkins University and Hospital to American medicine has been the residency system.

### Halsted's Contribution to Surgery

It is very difficult for all of us not to take for granted the present high development of surgery or to appreciate Dr. Halsted's rôle in this development. At the time that Halsted entered the field of surgery:

"The fundamental principles of surgery having to do with the prevention of infection, with the control of hemorrhage, with the handling of tissues, with drainage and with wound healing were just beginning to be appreciated in a scheme of surgical procedure. Local and regional anesthesia were unknown. The cranial and thoracic cavities had been approached only in accidental injuries, and brain surgery and thoracic surgery as we know them today had not been developed. Surgery of the thyroid was just beginning, there was no successful operation for cancer of the breast, no successful treatment of hernia. A gastric resection had not yet been done, intestinal resection with suture could scarcely be contemplated. In this country, surgery of the gallbladder and biliary tract was almost never considered."<sup>7</sup>

There were many other limitations, too numerous to mention.

At Halsted's death in 1922, he left us (based on his thorough appreciation of sound basic principles in surgical technique and his fertile imagination) superior contributions to the problem of intestinal anastomosis, to the treatment of inguinal hernia, to the radical treatment (and cure) of carcinoma of the breast, and to the therapy of hyperthyroidism and of aneurysm, as well as to the solution of other problems.

The Hunterian Laboratory was opened in 1905. In its forty-seven years of existence, there have been more than one hundred investigators carrying on their researches in it. Firoz<sup>8</sup> states: "A laboratory is not merely a place in which to work. It is not just a collection of apparatus, but is, in essence, an atmosphere created by those who work within its walls. To borrow from Milton, one might say that laboratories, like books, are not altogether dead things, but do contain a potency of life in them to be as active as the soul whose progeny they are."

In connection with the teaching of third-year students in this laboratory, Halsted in a letter to Welch wrote, "I should be sorry to have it forgotten that I initiated the operative course on animals." For many years this laboratory was directed by Harvey Cushing, one of Halsted's most brilliant pupils. During the years, some of this country's leading surgeons and professors of surgery have studied there, many under the tenure of the Halsted Fellowship. Firor has said that, "The spirit of inquiry, the interest in basic problems, and the excellence of performance are still dominant. It is reassuring to believe that the Hunterian laboratory will continue to pass on the spirit of Halsted from one generation to another."

This laboratory where so much of Halsted's investigation was carried out, and where so many of his pupils were encouraged to make fundamental contributions to surgery, is close to the hospital and plays its part still in the residency system of training which Halsted created.

Halsted's system, modified from the German System was described in a memorable address at Yale in 1904. At that time, Bloodgood Cushing, Mitchell and others had been trained under this system. In addition, Halsted interested young men in various special fields of surgery, placing Cushing and Dandy in neurosurgery, Young in urology, Baer in orthopedic surgery, Davis in plastic surgery, Baetger in radiology and Crowe in otolaryngology. These men in turn used the residency system in training men in their specialties.

Carter<sup>3</sup> presented a paper at the Halsted Centennial Celebration in Baltimore, February, 1952, which consists of an analysis of the attainments of the seventeen resident surgeons and fifty-five assistant resident surgeons trained by Halsted, and of the 166 second generation resident surgeons trained by his resident surgeons, a total of 238. In this group there have been thirty-seven professors of surgery, fourteen clinical professors, eighteen associate professors, fourteen clinical associate professors, seventeen assistant professors, sixteen clinical assistant professor, twenty-three instructors and ninety-nine private practitioners of surgery. Carter concludes that were Halsted alive today, "The group which would intrigue him most would be those 166 men who represent the second generation of resident surgeons. For they are the ones to whom it is now given to carry his torch and to create a third and larger generation of surgeons, who will also be imbued with the principles of

their remarkable progenitor, William S. Halsted."

Thus, you see "the fruition of Halsted's concept of surgical training," and how it has effected the development of surgery in the United States; how it promises to provide in the future many more outstanding investigators and clinicians of the Halsted school or the "safe school of surgery."

Time does not permit a detailed discussion of each of Halsted's contributions to surgical science. Furthermore, nothing that I or anyone else can say will add to their importance. The facts speak for themselves, and no one is more modest about them than was Halsted himself.

Leriche,<sup>9</sup> in speaking recently of these contributions mentions, among other things:

"Halsted was the first one to think of re-injecting lost blood arterially. He set the operative procedure that we all employ for cancer of the breast. Through his experimental studies he was a decisive influence in the surgery of the thyroid, parathyroid and thymus hypertrophy. He discovered the law of the grafting of glandular tissues. Finally, his contributions to vascular surgery is one of the most important up to modern times, and even in that field of surgery his influence is still evident here since Blalock is continuing Halsted."

Need I add that his monographs on goiter, on the ligation of the common iliac and of the left subclavian arteries are models of perception and precision?\*

"Finally, he founded a school of surgery whose splendor has no equal, except in the brilliance of Billroth's students.

"To be perfectly truthful, each one of us if he is sincere with himself must recognize that he depends, to a certain extent, on the teachings of Halsted."

It would not be possible to improve on the discussion given by Matas regarding Halsted as a surgical technician which appeared after Halsted's death. For this reason this discussion is reproduced here.

"Allow me to detain you for a brief space with a few reflexions, suggested by the commentary, occasionally heard, that Dr. Halsted was not what is popularly described as a 'brilliant operator,' a statement which might

\*As an example of the beauty of his writing, the following quotation relating to vascular surgery and taken from his article on ligation of the left subclavian artery for aneurysm will serve well.

"In ligating the first portion of the left subclavian within the chest the operator may not, as formerly, be more greatly impressed by the magnitude and cleverness of his performance than by the miraculous effect of the ligation of the artery upon the great, pulsating tumor which with each beat of the heart jarred the whole frame of the sufferer. The moment of tying the ligature is indeed a dramatic one. The monstrous, booming tumor is stilled by a tiny thread, the tempest silenced by the magic wand."

be interpreted as depreciatory of his technical abilities by those who are unfamiliar with his aims as a surgeon and the principles that governed his operative acts. If by 'brilliant' we mean the surgeon who utilized his opportunities to dazzle the public with the prodigies of his skill, who listens for the plaudits of the multitude more intently than he does to the murmured approval of his conscience, and who burns his incense to the gods of the gallery, then, we must agree, Dr. Halsted was not one of that class. But, what do we mean by a brilliant operator? In the sense in which it is most commonly used, brilliancy is a quality whose chief characteristic is speed, the quickness and dexterity with which an operator executes and accomplishes the operative act. This is a quality in which our forefathers excelled, to acquire which they bent all their energies, and in which they vastly surpassed us. In this respect, we, the surgeons of the present generation can no more compare our performances with theirs than we can make comparison between the speed of a horse car and that of a twentieth century limited railroad express. But when we consider the effects of a collision between horse cars, on the one hand, and railroad trains, on the other, including the wreckage that follows in each case, we may form some idea of the relative effects of speed as applied in the cyclonic operation of the older surgery and the calm but sure and safer motions of the surgery of the present. Happily for us and for humanity, the time has long passed when surgical brilliancy and ability could be gauged by the clock, or when the relative merits of surgeons could be estimated by the rules of the prize ring or the authority of the Marquess of Queensbury. That was well enough in the dim days of antiquity, in the days of Galen and Celsus, when limbs of conscious men were amputated with an axe or a guillotine; or in much later days, when a Lisfranc, a Dieffenbach, a Lizars, or a Liston, could disarticulate a hip in five minutes or less, provided that in the flourish of blades, one or more of the assistants were not put *hors de combat* by the lightning maneuvers of the operator; or that one could say of a modern master what was said of Fergusson, who, in lithotomy, proceeded with such lightning speed and skill that someone advised a prospective visitor to his clinic to, 'look out sharp, for if you only wink you will miss the operation altogether.'

"Then, time was everything, and any procedure that would relieve the patient of his encumbrance by the shortest route was at the highest premium. Before the discovery of anesthesia, the surgeon had to be a man with a heart of steel in order to carry on his work of relief in an atmosphere reverberating with shrieks and yells, lurid with blood, and laden with the germs of disease and death. Then, indeed, he was best surgeon who could slash off an offending limb in the quickest time. Then, indeed, brilliancy consisted in speed, speed at any cost, and the price of speed was high. As late as the early nineteenth century, the death rate was enormous, full 95 per cent and over for the hip; 70 to 80 per cent for the thigh and so on. At present, by the modern methods of safety, it has fallen to an insignificant and negligible figure, in so far as the operative act is concerned. However, do not misunderstand me as depreciating the quality of speed when this is not a mere race for a record but is the legitimate outcome of dexterity, knowl-

edge, system and method; the outcome of long experience and faithful practice in surgical exercises.

"But, I do not reckon speed as brilliancy when displayed chiefly, if not solely, for spectacular effect; when it is exhibited at the expense of security, and when appraised as skill it is rated above caution and judgment at the hazard of the patient's highest interests.

"Let us not forget that surgery, as it is known today, was a *terra incognita* to the most daring and skillful surgeons of scarcely half a century ago. Operations that are now a part of the daily routine of every well-established hospital would have seemed incredible to even such relatively modern masters as Mott, a Bigelow, or a Gross and other renowned contemporaries of this period, who would be astounded at the temerity and seeming foolhardiness of their successors.

"Professor Halsted, himself, has told us (Yale Address, 1904) that '1876, the year I first walked the wards of Bellevue Hospital, New York, the dawn of modern surgery in America had hardly begun.' The discovery of ether was not so old as to have obliterated all traces of the surgical rule, *Tuto, Cito et Jucunde*, but the rapid method of operating was slowly giving place to safer, more conservative and deliberate procedures. In fact, it was not until a whole decade had elapsed, after the introduction of antiseptic surgery by Lister (1878 to 1888), that the changed conditions wrought by anesthesia, antiseptics and asepsis were actually realized by the mass of the profession. It was only then that the systematic invasion of the great body cavities began and when the pelvis, the abdomen, the thorax and the cranium gradually surrendered their contents and became amenable to the laws of surgery.

"With anesthesia and asepsis as the master keys, experimental surgery received a new impetus and the horizon of surgery rapidly expanded. Roentgen's discovery of the X-rays then came in 1895-96 to inaugurate a new epoch in surgery and, by illuminating the body, incredibly multiplied the indications for surgical intervention. The rays and the collaboration of the physiological, biochemical, bacteriological and pathological laboratories have all combined to so transform the entire face of surgery that it is no longer recognizable in the light of its ancient portraiture.

"The number of operations had not only multiplied but new operations have been added and are being devised which could not have been attempted in the pre-Listerian period and which were unthinkable and entirely beyond the conception of the older operators. Again, we should remember that many of the most difficult and dangerous operations, made possible through the advances of contemporary surgery, are still only made safe by the exercise of the greatest caution coupled with most consummate skill.

"Such undertakings consume time and, if speed is to be the criterion of brilliancy, the surgeon who performs these operations—no matter how successfully—can never be called 'brilliant.' And it is precisely this class of cases in which Professor Halsted was engaged!

"According to my understanding, brilliance in surgery lies more in the results of the surgeon's intervention than

in the immediate act. To my mind *he* is the most brilliant surgeon, who, in equality of circumstances, saves or prolongs the greatest number of lives.

"The brilliancy of the operator should not be appreciated by the time he consumes in the performance of an operation, but by the effect that follows its achievement; not in the mere recovery of the patient from the immediate operative act; but in the way in which he recuperates; in the length of time required for his recovery; in the period demanded to restore him to usefulness, and, above all, in the permanency of the cure which is accomplished.

"It is in this manner that I would rate and compare the brilliancy of surgeons, and it is from this viewpoint that Halsted is considered one of the most brilliant and greatest surgeons of his time. It is the sort of brilliancy at which he aimed and with which he sought to imbue his pupils through his teachings and example. It is the sort of brilliancy for which every conscientious surgeon—who places his patient's welfare and the good repute of his profession above the vanity of his own flesh, should strive."

### Summary

In the preceding pages, an attempt has been made to pay tribute to William Stewart Halsted on the occasion of the Centennial year of his birth. Obviously this had been done at greater length and with greater skill by those surgeons throughout the world who knew and worked with Halsted. Reference has been made to his life, training and contributions. Probably he will be remembered not because he showed how such diseases as hernia and cancer of the breast can be cured, but because of his inauguration of a successful method of training outstanding surgeons, the residency system. He is the greatest surgical philosopher which this country has produced and alone among our surgeons deserves to be classed with Pasteur, Lister and

Osler in the top rank of medical giants. This is not because of a forceful personality, political power, or oratorical splendor, attributes which usually do not last beyond the life of a scientist. Rather it is due to fidelity to principles, to his fertile investigations, his imagination and modest humanitarianism. With the passing of years his stature grows rather than diminishes.

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### SEGMENTAL PERIDURAL BLOCK

(Continued from Page 178)

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## St. Luke's Hospital Clinico-Pathologic Conference

Edited by

J. C. Smith, M.D.  
Saginaw, Michigan

Clinical Discussion by

R. M. Heavenrich, M.D.  
Clinical Record

**T**HE PATIENT was a Mexican male child, five years old, who was well until five days before admission to the hospital. At that time, he developed high fever, headache, and vomiting that were associated with what seemed to be an infection of the upper respiratory tract. The spinal fluid contained 423 cells per ml. with 11 per cent polymorphonuclears and 89 per cent lymphocytes. The patient was then referred to St. Luke's Hospital. At the time of admission, he complained of pain in his legs and back.

The past history revealed that there had been a weight loss of ten pounds during the past six months. The patient had been treated for "worms" three months before the onset of the present illness. Shortly thereafter, he vomited thirty-eight "long worms," and since that time, he had vomited "worms" on three occasions. The patient was born in Texas and had come to Saginaw six months before the present illness. The family, including seven siblings, lived in a camp and drank well water. There was no known exposure to tuberculosis or contagious disease.

Physical examination revealed an alert and apprehensive child. The temperature was 102° F. The pupils responded slowly to light. There were no nystagmus or papilledema. The ears and nose were normal. The mouth revealed superficial erosion of the gums and the throat was hyperemic. The neck was stiff. Palpation disclosed no enlargement of lymph nodes. Respirations were labored and auscultation revealed moist râles over both posterior bases. The heart was not enlarged, there were no murmurs, and the pulse was of increased rate with normal sinus rhythm. The abdomen was soft. The external genitalia were normal. There was twitching of the upper and lower extremities on the left. The reflexes were hypoactive on the right and hyperactive on the left.

The urine was yellow, cloudy, acid, and of specific gravity 1.009 with uric acid crystals and occasional epithelial cells. Hematologic examination revealed 12.8 grams of hemoglobin per 100 cc. There were 4,000,000 erythrocytes and 9,700 leukocytes per cu. mm. Differential count of 100 cells revealed 72 segmented granulocytes, 2 band cells, 20 lymphocytes, 5 monocytes, and 1 eosinophil.

The temperature receded to 98.6° F. during the first three days. On the fourth day, the temperature rose sharply to 101.6° F. and returned to normal. On the fifth day, the temperature began an irregular but steadily

progressive rise. The patient became comatose on the eighth hospital day. At that time, the spinal fluid examination revealed increased pressure, clear, colorless fluid, and 172 cells per ml. of which 105 were segmented granulocytes, and 72 were lymphocytes. The sugar was 50 and the total protein was 61 mg. per 100 cc. Smear and culture were negative. Two days later, a second spinal fluid examination revealed a pressure of 90 mm. H<sub>2</sub>O, a normal Queckenstedt test, and 257 leukocytes per ml. with 192 segmented granulocytes and 65 lymphocytes. The sugar was 40 and the total protein was 74 mg. per 100 cc. Culture and smear of this specimen revealed *Diplococcus pneumoniae*. Chest x-ray on the eighth hospital day was stated to reveal no evidence of intrapulmonary disease. The tuberculin skin test, 1:1000 was negative after twenty-four and forty-eight hours.

Widespread muscle spasm developed, moist râles became audible throughout both lungs, and the temperature rose to 105° F. Penicillin and aureomycin were given. Widespread convulsions developed, the temperature rose to 107° F., and the patient died on the twelfth hospital day.

### Discussion

**DR. R. M. HEAVENRICH:** There are several comments I should like to make about the history. We are told that this child of five years was well until five days before coming to the hospital, and that in the preceding six months he had lost ten pounds in weight. A weight loss of ten pounds in a child of this age represents a loss of 25 per cent of his expected weight and indicates that a serious illness was present much longer than five days before his admission. The vomiting of "long worms" probably represents ascariasis. Of course, any itinerant worker coming from the subtropic (and known to have one parasitic infestation), may also have others, such as amebiasis or hook worm disease. However, I suspect that these, if present, are incidental to the present illness.

On admission, this child complained of fever, headache, vomiting, and pain in his legs and back. These clearly indicate a lesion of the central nervous system and this is supported by the finding in the spinal fluid of some 400 cells of which almost 90 per cent were lymphocytes. The admitting officer must have strongly suspected acute poliomyelitis at this time and I presume that this was the first clinical impression. The important physical findings include sluggish pupillary response to light, stiff neck, and râles over the bases of both lungs. These further indicate central nervous system disease, and the râles may or may not be of importance. Given the history of only a brief upper respiratory infection, in the absence of cardiac enlargement or paralysis of the diaphragm and intercostal muscles, I shall assume that the râles bear no important relation to the intracranial lesion. Of greatest significance, however, is the absence of muscle weakness or paralysis. Most serious cases of poliomyelitis develop such changes by this time although they may be absent in the early part of the illness. There were also muscle twitching and hyperactive reflexes on the left side. These signs could be attributed to a focal cerebral lesion on the

right side. However, in the absence of other localizing signs, I shall assume that this is not a reliable indication of the site of the intracranial lesion.

The laboratory data are helpful in that there was only slight anemia with no leukocytosis, and no increase of immature myeloid leukocytes. The absence of leukocytosis does not necessarily exclude a bacterial infection as with overwhelming infection, the marrow production of leukocytes may be depressed. However, in these cases, there is usually an increase of band cells, and often, of nucleated erythrocytes. It is surprising that the eosinophil count is not higher, as we know that parasitic disease exists. It is also of importance to recall that widespread tuberculosis may be accompanied by only a slight leukocytosis. Anemia, however, is common. Two of the most significant features of this case are the negative tuberculin skin test and the negative x-ray of the chest. (Fig. 1). Either of these would be most helpful if they were positive. However, both may be negative in the presence of widespread tuberculosis. This applies particularly to the skin test, and indicates that the infection is recent and extensive. I have seen cases of miliary tuberculosis of the lungs in which the lesions were not demonstrable for some time by radiographic examination. If this proves to be a case of tuberculosis, it will be profitable to see the absence of these two features so clearly demonstrated.

Turning now to the hospital course, we see that this child manifested a steady rise in temperature, became comatose, and died after only twelve days in the hospital. During this time, the spinal fluid revealed a slight elevation of protein, a normal sugar content, absence of blood, and a leukocyte count that did not exceed 200 cells per cu. mm. In addition, the smear and culture were negative. This is consistent with viral or tuberculous infection. I shall assume that a pellicle in the spinal fluid did not form as we have no statement to that effect. Then on the sixth hospital day, the smear and culture both revealed pneumococci. I must say that the clinical information is not, in my experience, suggestive of pneumococcus meningitis. There seems, also, to have been no response to penicillin as the disease was then sharply progressive with death six days later.

My differential diagnosis includes poliomyelitis, brain abscess, hemorrhagic encephalitis, tumor, tuberculous meningitis, and pneumococcal meningitis. There are several substantial points that stand against poliomyelitis. These include marked loss of weight during the previous six months, absence of muscle weakness or paralysis, and absence of respiratory involvement during the terminal course. Brain abscess is much more difficult to exclude. However, no source was demonstrated such as infection of the paranasal sinuses, the mastoid air cells, or the lungs. The patient gives no history of such a focal infection during the six months preceding the clinical onset of his illness. There was no papilledema. I do not think that the full story offers much support for this possibility although brain abscess, in my opinion, cannot be excluded. Viral infections of the brain accompanied by diffuse bleeding usually are manifested in part by spinal fluid that is consistently bloody, and on this basis I discard the diagnosis. Tumors of the central nervous

system in children usually occur in the posterior fossa, enlarge slowly, and are accompanied by papilledema and by motor and proprioceptive disturbances without prominent signs of widespread meningeal inflammation. Thus,

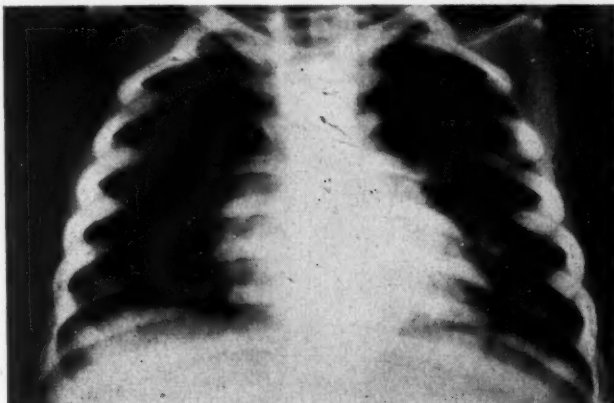


Fig. 1. The chest x-ray taken four days before death.

tumor seems most unlikely. Many features of this case are strongly suggestive of acute tuberculous meningitis. These include loss of weight, signs of extensive meningeal inflammation with relatively low spinal fluid cell count and normal sugar, and rapidly progressive course. The negative tuberculin skin test is not disconcerting. The normal chest x-ray, four days before death, is not unusual, but may occur with or without miliary tuberculosis. I would make miliary tuberculous meningitis my first clinical diagnosis were it not for the spinal fluid culture of a pneumococcus. Even with this objective finding, the spinal fluid disclosed normal sugar and low cell count, and the smear and culture were negative on the first examination. We are not certain of any pre-admission treatment. It is possible that use of sulfa or antibiotics prior to hospitalization might have clouded the clinical picture that the original spinal fluid was sterile. In the hospital, however, pneumococci should have responded to penicillin. Nevertheless, since my clinical evaluation is subjective, and this finding of a pneumococcus in the spinal fluid is objective and cannot be disputed, I shall make my clinical diagnosis acute bacterial meningitis due to *Diplococcus pneumoniae*.

DR. J. C. SMITH: As a specialist in radiology, Dr. Caumartin, would you expect the chest x-ray, taken four days before death, to show miliary tubercles if this is a case of pulmonary and meningeal tuberculosis?

DR. H. T. CAUMARTIN: I would say that most cases of tuberculous meningitis in children, who have no other apparent focus of tuberculous disease, do have miliary tuberculosis of the lungs that is demonstrable by radiographic examination, particularly during the latter part of their illness. However, I must emphasize that such is by no means always the case, and I would say that in this patient, the negative chest x-ray does not exclude miliary tuberculosis of the lungs.

#### Dr. Heavenrich's Diagnoses

1. Acute pneumococcal meningitis.
2. Ascariasis of gastrointestinal tract.

## Anatomic Diagnoses

1. Acute miliary tuberculous meningitis.
2. Caseous tuberculosis of hilar lymph node with extension into left main bronchus.
3. Miliary tuberculosis of lungs, pleura, diaphragm, spleen, kidneys, appendix, peritoneum, and mesenteric and pancreatic lymph nodes.
4. Ascariasis of ileum.



Fig. 2. Tuberculous fibrocaseous plaque deep in cerebral sulcus.

DR. J. C. SMITH: I want to acknowledge Dr. Heavenrich's courage in basing his diagnosis on the laboratory finding of pneumococci in the spinal fluid. There is no question but that he would have made the correct diagnosis had this organism not been found. On the second examination of spinal fluid, a Gram positive, bile soluble diplococcus was present in both smears and culture. The organism was not demonstrated in the meningeal exudate at autopsy and the morphologic aspects of the meninges

were not typical of the exudative inflammation caused by pneumococci.

Autopsy examination revealed widespread miliary tuberculosis of the viscera and marked caseous enlargement of the lymph nodes at the hilum of the left lung. The caseous tuberculosis of one of these lymph nodes extended through the wall of the overlying main bronchus forming a large open ulcer. A moderately thick exudate was limited to the base of the brain. Sections revealed a cluster of tubercles enclosed within dense fibrous connective tissue deep within a cerebral sulcus. (Fig. 2). This fibro-caseous plaque revealed a central focus of caseous necrosis. The meninges over the base of the brain were covered with a thick layer of fibrin in which there were tubercles. Large numbers of acid-fast bacilli were identified in this exudate with the Ziehl-Neelsen stain. It is apparent that the fibrocaseous plaque was present for some time before the diffuse fibrinous meningeal inflammation developed.

This case represents a typical example of childhood tuberculosis in which the development of resistance was not sufficient to cope with the infection. It is probable that the pulmonary infection occurred some time before the onset of the present illness. This is indicated by the moderate fibrous reaction about the pulmonary tubercles. The bacilli in the lungs extended into veins and were carried through lymph channels to hilar nodes, one of which subsequently ulcerated into the left main bronchus. From the latter site, organisms were probably both expectorated and swallowed. Thus, widespread visceral tuberculosis developed by lymphatic, hematogenous, and bronchogenic dissemination. Also some time before the acute illness, the fibrocaseous plaque formed deep in a cerebral sulcus, probably as an isolated lesion. It is likely that the tubercle bacilli in the cerebral sulcus remained localized within the surrounding fibrous connective tissue until caseous necrosis developed. At that time, the organisms were released into the meninges in large numbers, acute diffuse fibrinous inflammation developed, and the patient entered the hospital with signs indicative of extensive meningeal inflammation. This explanation of pathogenesis is consistent with the concept of Rich,<sup>1</sup> who states that tubercle bacilli injected into the carotid artery of the rabbit do not incite diffuse meningeal inflammation for the reason that the meninges function poorly as a filter of particulate pathogens. In contrast, however, the injection of tubercle bacilli directly into the subarachnoid space is followed by extensive and diffuse meningeal inflammation. This is supported by the finding in most cases of human tuberculous meningitis, of a fibrocaseous plaque or a cortical tuberculoma from which large numbers of tubercle bacilli gain entrance to the subarachnoid space.

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## MEDICAL COSTS

Like all other costs, medical costs have risen in the last few years. Statistics presented by the United States Department of Labor for the third quarter of 1952 revealed that living costs had increased 90.8 per cent since 1935-39 while medical costs had increased only 65.5 per cent in the same time. Between 1935-39 and 1950 phy-

sicians' fees increased only 48 per cent while the average weekly wages increased 165 per cent. As a result, the average person works only 60 per cent as long now to pay for the same amount of medical services.—WALTER B. MARTIN, President-Elect, AMA.

# Detroit Physiological Society

Meeting of November 19, 1953

## Brain Stem Connections of the Cervical Spinal Cord (N. Lat. Cervicalis)

F. A. MORIN and J. CATALANO, *Department of Anatomy, Wayne University College of Medicine, Detroit, Michigan*

Previous work from this laboratory indicated that some spinal pathways subserving superficial as well as deep sensory modalities relay in the lower part of the medulla oblongata, outside the dorsal column nuclei. A group of cells located laterally to the dorsal horn within the lateral funiculus is present in the lower part of the oblongata and throughout the first two cervical segments. This nucleus (N. lateralis cervicalis) is well developed in the cat, and is present also in the monkey.

It has been stated that N. lat. cervicalis sends its axons to the cerebellum, but using electrophysiological techniques we did not find sure evidence that this nucleus was involved in cerebellar connections. It seemed to us that further work was necessary for a better understanding of the functional significance of this structure, and the results of some preliminary work are here reported.

In a group of kittens and adult cats, extensive lesions of the cerebellum, including the lateral lobes and/or all the anterior lobe and cerebellar nuclei, did not induce retrograde cell changes in the N. lat. cervicalis. Conversely, lesions at midbrain level interrupting more or less completely the medial lemniscus were followed by chromatolysis of the N. lat. cervicalis opposite to the side of the lesion.

It appears that this nucleus projects mainly to the opposite thalamus and is not directly connected with the cerebellum, afferent impulses from the limbs could therefore reach the cerebellum without relaying in the nucleus lateralis cervicalis. This structure, on the other hand, seems more concerned

with projections to the sensory areas of the cerebral cortex, as the results of electrophysiological experiments indicate.

## Partial Purification of Viruses Using Ion Exchange Resins

GERALD L. LO GRIPPO

*Department of Laboratories, Henry Ford Hospital*

A technique for the partial purification and concentration of poliomyelitis virus from central nervous system tissue using a strong base anion exchange resin (Amberlite XE-67) has been adapted to the extraction of Coxsackie virus excreted in human stools. Two major advantages of the procedure are: (a) its capacity for handling large volumes of crude infected material in a relatively short period of time, and (b) its relative simplicity in that it can be conducted at room temperature without the use of centrifuges. Coxsackie virus obtained by this procedure shows a high degree of infectivity for suckling mice.

It remains to be demonstrated that the Coxsackie virus extracted from the stools can be used as a complement fixing antigen in a serological test for an early presumptive diagnosis of Coxsackie infection. Confirmation of the disease, however, would still rest on the increase of antibody titer during convalescence. The principal value of this work is not so much its use in the early diagnosis of Coxsackie infection, but rather the fact that a new "tool" has been developed which can be utilized in the search for a practical laboratory diagnosis of virus diseases in general.

\* \* \*

A third paper entitled, "The Chemistry of Muscular Contraction and Relaxation" by Laszlo Lorand, Wayne University College of Medicine, was also presented on this program.

## Michigan State Medical Society Past Presidents 1922-1930



Throughout most of the 20's—almost until it happened in late 1929—Michigan and the rest of the nation had no inkling of what lay ahead: The Great Depression. It was a happy, prosperous time. Radio was the wonder of the day; first, the ear phones and crystal set, then the “super-heterodyne” powered by numerous tubes in an ornate cabinet. Michigan State College put the first educational radio station on the air in 1924. Five years later, the Michigan State Police came up with the first statewide police network. The Motor Era brought a great web of concrete highways to Michigan which introduced the gasoline tax in 1925 to meet the cost! The Straits of Mackinac ferry became part of the Highway Department, and the Detroit-Windsor Tunnel was opened. Trucks carried more and more of the freight between cities and into the villages. The Air Age was foreseen when a thundering Ford tri-motor provided the nation's first regularly scheduled air service between Detroit and Grand Rapids. The hectic but happy days of the 20's are good to remember; with 1930 a new experience began!

## Here's an Opportunity

One of the developments of our time, particularly since the close of the Second World War, has been the large number of young graduates of foreign medical schools who are coming to our country for postgraduate training in our hospitals. Medicine is international in the true sense of the word. Physicians all over the world have a common language. Through these bright young men who are coming to us to benefit themselves and their own peoples, we, as doctors of medicine, can do much to dispel misunderstandings and suspicions that are often the basis for wars such as we have witnessed in our time. As a foundation for a friendly relationship, those of our profession who come in daily contact with these young doctors should forget the superman attitude, come down from the ivory towers and give them the attention and service necessary. They must not be treated as glorified orderlies. To accomplish the desired result requires a teaching program and extra time and effort on the part of all the members of our hospitals' staffs. Projects are already in effect bringing graduates of accredited foreign schools to certain of our hospitals for training, and more are planned.

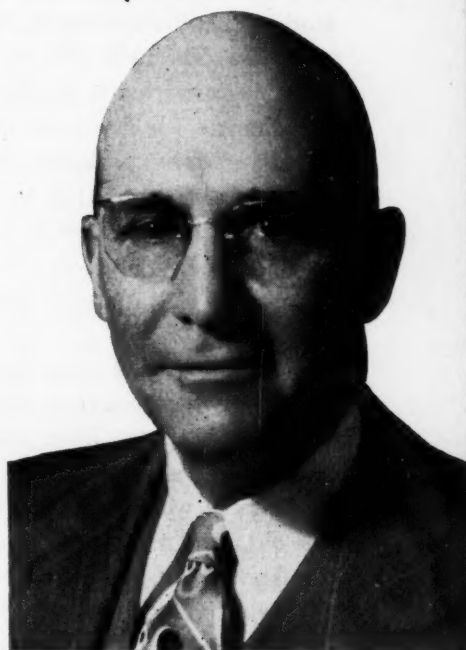
Another means of promoting good will and understanding, which has received commendation from abroad, is the medical-surgical teams which have gone to other countries from the United States for teaching purposes under various auspices. Perhaps some of the gratitude expressed for their work is due to the recognized fact that we, as doctors, have no political axes to grind, only a desire to help others to help themselves.

Since the close of the Second World War, the United States has spent some forty billions of dollars to give aid to foreign countries. For our pains, we have earned some gratitude, and quite a bit of ill-will. A good many of us are beginning to realize that what most people who are in difficulty (elsewhere as well as in our own country) want is a helping hand, not a handout or a bagfull of dollars. We, as citizens and doctors of medicine, can help in bringing mutual understanding and peace to our country and the world by doing our part, small as it may seem, in the care and education of these postgraduate medical students from foreign lands who are in our hospitals today.

*L. W. Hull*

*President, Michigan State Medical Society*

*President's*



*Message*

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# Editorial

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## THE NATIONAL LEGISLATIVE PICTURE

**T**HE SECOND session of the 83rd Congress is now meeting in Washington. Congressmen have been home for the holidays, and to talk with their constituents. Repeatedly, we have urged our members to call on these or make the acquaintance of any Congressmen whom they did not know personally. The destiny of the nation depends on the actions of our Senators and Representatives.

Thousands of new legislative acts will be introduced and acted upon. Most will be good and needful, some will not be to our liking. If we write to our friends in the Capitol, or telephone, our chances for favorable action will be much enhanced. Many probable acts will be to our distinct advantage in that we and our patients will be better able to carry on.

### Social Security

A much-needed amendment to the Social Security Act is removal of the restrictions placed on older people who have earned old age benefits, but who for understandable reasons must continue to do some work, and add to the monthly stipend this old age "insurance" "guarantees" them. Doctors know that most old people who have worked all their lives cannot simply stop, and expect to keep their health. All restrictions should be removed from the old age insurance program. Those who can continue working or change their employment but still help earn their living will continue to pay into the public treasury their income taxes and their social security. By prohibiting earning more than a mere \$75 per month, the government loses considerable in taxes, and industry loses the benefit of years of training. Everyone loses. This argument is not for the doctors, because we are not included in the social security benefits, but it does apply to nearly ten million persons.

Government and industry have forced early retirement on persons over sixty-five. Government, through its laws, denies benefits if the elderly person attempts to relieve his increasing needs by earning a stipend.

## Our Tax Laws

Taxes must be raised to support the Government, but the spreading of the tax can be more justly made. Exemptions for dependents, a very proper arrangement, are really inadequate. No parent can support a child, and especially send him to school, for the \$600.00 exemption. Insufficient ten years ago, today it should be at least \$1,000.00. This modification would greatly benefit everyone, especially our struggling patients who are just making ends meet. A little assistance on the tax deduction would help.

We believe all just medical and health expenses should be deductible, instead of the calculated amount now recognized. People naturally hesitate to incur health service bills, through a certain feeling of thrift, but if the cost can be used in income tax adjustment, some of their hesitancy would end. This amendment to the tax laws would make for more bookkeeping in the doctor's office, but would benefit his patients.

Another item of income tax should interest practically all our members, those of us who have accumulated a few shares in the industry of the nation, and are entitled to receive dividends on their stock. Before industry can pay a dividend, the net earnings must pay an income tax starting at 52 per cent. Enough earnings must be retained in the business to make replacements, buy new equipment, and pay for unexpected emergencies. After those expenses, industry pays dividends. These dividends already have paid high income taxes, but every one who gets a dividend must also pay another tax on this same income. The tax of 52 per cent has already been paid. Then the least tax paid by the individual is 22.2 per cent and depending on his income bracket, may go as high as 92 per cent. The excess profits tax which took another huge bite is now repealed.

### Tax Deferments for Annuities

The House Ways and Means Committee is considering legislation permitting the self-employed, including physicians, to defer, until retirement, income tax payments on a limited portion of earnings paid into restricted annuity plans. The legislation, popularly known as Jenkins-Keogh for

its two principal sponsors, was the subject of hearings last August, after Congress had adjourned. The proposal is certain to be reopened when the Ways and Means Committee takes up revisions of the income tax laws this session.

### Constitutional Amendments

Joint Resolution No. 1 of this Congress, the so-called Bricker Amendment, is sure to attract attention. A hearing is supposed to have been held before this appears in print and possibly a vote taken. There is strong organized opposition to the amendment. When first proposed, it had a majority of the Senators' names attached, but some have withdrawn. When first proposed, Mr. Dulles, the present Secretary of State, was in favor of it, but after the assuming of his new duties, he has apparently changed his mind. His advancement in the treaty-making position may be significant. He is now the man who makes the treaties.

In brief, the "Bricker Amendment" does not restrict the treaty-making power of the President; it simply provides that any treaty or executive arrangement shall not by-pass the Constitution or the laws of the states or Federal Government as they may and do now. Such a proposed treaty would be subject to approval by action of the complete membership of both the Senate, and the House, not just the quorum actually sitting when action is taken.

Recently we received a long circular from a well-known propaganda source asking for contributions and active help in defeating the Bricker Amendment. The American Medical Association and the Michigan State Medical Society have both taken a firm stand in favor of the principle of this amendment. As the Constitution now stands, we could have the socialized medicine of a large part of the United Nations infiltrated into our system of life. We already have too much of it, and another large group is clamoring for medical benefits at the expense of the Federal Government. To protect our independent heritage in medicine, we need some such law as the Bricker Amendment.

### GOLDEN GOOSE

**G**OLDEN GOOSE meetings are held throughout the state in an attempt to reach directly most of the doctors who make up the membership

of the Michigan State Medical Society. Probably not more than one third of the doctors in the active practice of medicine can remember the condition of practice, the problems of financing the health care our patients needed before the days of the voluntary medical and hospital plans, the Blue Cross and Blue Shield. The only hope for relief in contemplation was State Medicine until the medical profession demonstrated to the insurance world that a method could be developed which would and did succeed. The two service groups were sponsored and created by our own trial and effort. Serious unfavorable usages have developed in the work of the Blue Cross, and incidentally of Blue Shield. A survey of 12,201 admissions has disclosed many cases of over-stay of patients in the hospital, or unnecessary laboratory services requested. Hospitalization of patients as Blue Cross patients, for services not covered by the contract, has occurred.

A few days ago, an attorney in active practice in one of our larger cities told the editor of a case he had in court. A patient attempted to collect unemployment insurance and industrial insurance benefits. An automobile injury received while on the way to work was ruled compensable. The patient had already been cared for by Blue Cross and Blue Shield. The court ruled the industrial insurance carriers should recompense the Blue Cross-Blue Shield, when an attorney sensing a gross injustice asked for that ruling. Blame for faulty usage of insurance benefits belongs to the demanding public, the negligent hospitals, and the accommodating doctor. The doctors of the state are the ones who can protect their own voluntary service plans if they will give patients whatever attention is needed—but not unauthorized service. We should read the insurance contract, and be familiar with its provisions. We have a limited contract to cover specific services. We once tried an all-inclusive policy and almost went bankrupt.

### PEPTIC ULCER: AN OBSOLETE TERM

**S**EMANTICS—bad semantics—can be lethal! The expression "peptic ulcer" has been fatal to some patients, and can be fatal to more if it is not abandoned.

There was a time when duodenal ulcers and stomach ulcers seemed to have enough in common to justify an expression which would include them

both. "Peptic ulcer" served that purpose well enough in its day, but its day is past.

The expression "peptic ulcer" means "benign ulcerating lesion of the stomach or duodenum"—caused, according to Dorland's *American Illustrated Medical Dictionary*, by gastric juice. This is all right, for the duodenum. It is *not* all right—as a clinical or roentgenographic diagnosis—for the stomach. There it always includes an uncertain proportion, varying from 10 to 20 per cent according to the criteria used for diagnosis, of cases of ulcerating gastric carcinoma which cannot be identified as such until a surgical specimen is examined microscopically.

"Peptic ulcer" is therefore far too inclusive a term to be useful; it is, indeed, a dangerous term, since it seems to say more than it does. "What is good treatment for peptic ulcer?" is as foolish a question as "What is good treatment for a skin ulcer?" Yet it is asked, and debated, as if it were meaningful; and many a case of early and potentially curable gastric cancer goes on to an inoperable or incurable stage because his doctor is thinking in terms of "peptic ulcer."

Semantics—the meanings of words—is the business of editors; and it should be the business of editors to scotch this dangerous and obsolete expression wherever they encounter it. "Peptic ulcer" should be taboo in medical publications. Its elimination might save some lives.—HENRY L. ARNOLD, JR., M.D.

EDITOR'S NOTE.—This editorial, prepared by the Editor of the *Hawaiian Medical Journal*, is published in an effort to clear expression of terms.

## HOSPITAL EXPENSE CONTROL

**G**RACE HOSPITAL in Detroit, both branches, has adopted a new rule. Every order for medication or treatment must be rewritten by the physician in attendance every forty-eight hours. It was found that expensive drugs were ordered and a stop order forgotten. It has saved Michigan Hospital Service and the patients hundreds of dollars. The editor heard of a case where diathermy treatments were given for two weeks on an order, and only stopped when the patient asked why they were being continued.

## URGE TESTS FOR PENICILLIN

The American Foundation for Allergic Diseases urged recently that doctors give patients allergy tests before administering penicillin.

Dr. Horace S. Baldwin, president of the foundation, reported that asthmatics, for example, were abnormally sensitive to penicillin injections. He estimated that there were 1,000,000 asthmatics in the United States and between six and seven million others affected with allergic ailments.

The doctor remarked that some day persons afflicted with asthma or severe allergy might wear tags warning against use of penicillin in case of accident.—*Philadelphia Medicine*, Jan. 2, 1954.

## CONNECTICUT PHYSICIAN HONORED IN MICHIGAN

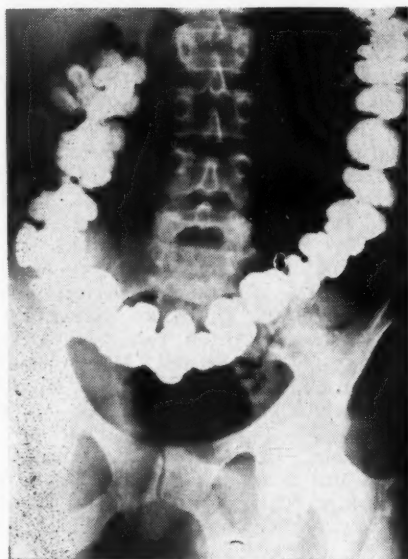
Mackinac Island, Michigan, was the scene recently of special ceremonies honoring one of Connecticut's most illustrious physicians, William Beaumont. It was in 1822 that Dr. Beaumont carried out his analytical studies on Alexis St. Martin which earned for him the epithet, "Father of Physiology." Michigan physicians and civic organizations have contributed funds for the erection of a shrine on Mackinac Island to be completed this year. Dr. Beaumont's office at Mackinac Island, as it appeared in 1822 when it was a trading post, also will be restored and become a part of the shrine.

William Beaumont was born and raised in Lebanon, Connecticut. In the early 20's, he was caught in the migratory wave sweeping the eastern seaboard, moved to Champlain, New York, and then to St. Albans, Vermont, in which latter place he studied medicine under Dr. Benjamin Chandler. His experiences in the U. S. Army gave him his opportunity to carry out his epoch-making experiments on the physiology of the stomach.

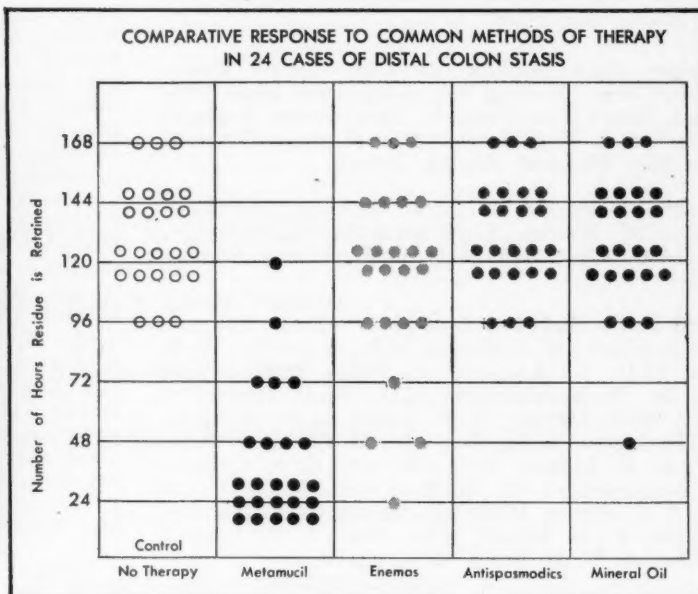
Connecticut has honored Dr. Beaumont in many less dramatic ways than Michigan.—*Connecticut State Medical Journal*, January, 1954.

## PREDICTIONS

Since everybody else is making 1954 predictions, ranging from sublime optimism to depression-depth gloom, we thought you might be interested in a 1944 prediction we ran across, authored by economist Dr. Julius Hirsch. A decade ago, he said: "The best we can hope for, after the first postwar replenishment, is a national income between \$100 million and \$108 million, and an employment of 47 to 49 million, not including those in public works." (In 1953, we had 62 million employed, and a personal income of about \$280 million.)



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## Management of Distal Colon Stasis with Metamucil®

The "irritable colon" resulting in distal colon stasis is a hard-to-manage by-product of many abdominal or stress conditions.

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Metamucil is the highly refined muciloid of *Plantago ovata* (50%), a seed of the psyllium group, combined with dextrose (50%) as a dispersing agent. It produces smooth fecal bulk necessary to incite the normal peristaltic reflexes, without causing irritation, straining, impaction or interference with the

digestion or absorption of vitamins.

The average adult dose is one teaspoonful of Metamucil powder in a glass of cool water, milk or juice, followed by an additional glass of fluid if indicated. This amount of fluid is essential for the production of "smoothage."

It is supplied in containers of 4, 8 and 16 ounces. Metamucil is accepted by the Council on Pharmacy and Chemistry of the American Medical Association.

SEARLE Research in the Service of Medicine

\*Barowsky, H.: A Roentgenographic Evaluation of the Common Measures Employed in the Treatment of Colonic Stasis. *Rev. Gastroenterol.* 19:154 (Feb.) 1952.

## COUNTY SECRETARIES CONFERENCE

(Continued from Page 202)

**Woman's Auxiliary Representatives.**—Mrs. W. S. Stinson, Bay City; Mrs. A. F. Milford, Ypsilanti; Mrs. D. M. MacGregor, Flint.

**Michigan State Medical Assistants Society Representatives.**—Miss Charlotte Ash, Kalamazoo; Miss Hallie Cummins, Caro; Miss Lorine R. Nuechterlein, Saginaw; Mrs. Elizabeth E. Peck, Detroit; Miss Marlouise Redman, Detroit; Miss Margaret Schultz, Detroit.

**Executive Secretaries of County Medical Societies.**—Mrs. Sara M. Warren, Flint; Miss Else Kolhede, Detroit; Carl G. King, Saginaw; J. O. Devereaux, Pontiac. Pontiac.

**MSMS Public Relations Committee.**—S. E. Andrews, M.D., Kalamazoo; H. G. Bacon, M.D., Scottville; W. E. Barstow, M.D., St. Louis; F. C. Brace, M.D., Grand Rapids; M. W. Buckborough, M.D., South Haven; R. A. Frary, M.D., Monroe; A. B. Gwinn, M.D., Hastings; W. J. Herrington, M.D., Bad Axe; E. C. Long, M.D., Detroit; G. E. Millard, M.D., Detroit; E. S. Oldham, M.D., Breckenridge; C. Allen Payne, M.D., Grand Rapids; A. C. Pfeifer, M.D., Mt. Morris; W. Z. Rundles, M.D., Flint; C. K. Stroup, M.D., Flint; C. L. Weston, M.D., Owosso; V. M. Zerbi, M.D., Ypsilanti.

**Past Presidents.**—Otto O. Beck, M.D., Birmingham; L. J. Hirschman, M.D., Traverse City. and J. Milton Robb, M.D., Detroit.

**Guests.**—Mrs. A. D. Aldrich, Houghton; Henry Alexander, Detroit; Mrs. S. E. Andrews, Kalamazoo; G. E. Anthony, M.D., Flint; Mrs. Rose B. Anthony, Flint; P. S. Barker, M.D., Ann Arbor; G. H. Bauer, M.D., Ann Arbor; Mrs. I. C. Berlien, Detroit; B. A. Breakey, M.D., and Mrs. Breakey, Ann Arbor; Mrs. R. S. Breakey, Lansing; J. W. Bryce, M.D., Center Line; Mrs. F. G. Buesser, Detroit; Wm. H. Byrne, Detroit; J. W. Castellucci, Detroit; Verne Collett, Detroit; J. R. Foster, Detroit; Mrs. R. A. Frary, Monroe; A. K. Gillies, Toronto, Ontario; L. G. Goodrich, Detroit; Wm. F. Grimshaw, Detroit; Mrs. Frank Groat, Grand Haven. J. Joseph Herbert, Manistique; Mrs. R. J. Hubbell, Kalamazoo; M. J. Ittner, M.D., Midland; Mrs. O. J. Johnson, Bay City; L. U. Lang, M.D., Kitchener, Ontario; Mrs. Wm. MacKersie, Detroit; Mrs. J. E. Mahan, Allegan; Neal L. McCue, Detroit; Mrs. Lee Millard, Detroit; Mrs. K. C. Miller, Saugatuck; Mrs. A. B. Mitchell, Allegan; Anton Patti, Jr., Detroit; L. A. Potter, Lansing; V. P. Russell, M.D., Royal Oak; Mrs. Edith B. Russell, Pleasant Ridge; A. R. Schaedel, Detroit; Helen Schick, Detroit; Mrs. C. M. Schrier, Kalamazoo; Mrs. M. L. Shadley, Pontiac; R. F. Staudacher, Chicago, Illinois; W. S. Stinson, M.D., Bay City; Miss Carol Towner, Chicago, Illinois; Warren F. Tryloff, Lansing; E. G. Upjohn, M.D., Kalamazoo; Mrs. Ruth C. Weston, Owosso; E. H. Wiard, Lansing.

Thanks are extended to all of the participants in the program and Miss Helen Schulte, Mr. A. D. Brewer, Mr. S. A. Campbell, Mr. Dwight Jarrell of the executive office.

## Recent M.D. Locations in Michigan

### Aided by the M. D. Placement Bureau

#### July, 1953

Andrew V. Bedo, M.D., Mt. Pleasant (from New York)  
Joseph E. Cooper, M.D., Bangor (from Military Service)  
Malcolm Delaney, M.D., Farmington (from Canada)  
Thomas P. Hayes, M.D., St. Joseph (from Niles)  
George B. Loan, M.D., Monroe (from Toledo)  
Thomas C. McInerney, M.D., Royal Oak (—)  
Stuart Middleton, M.D., Monroe (from Flint)  
Robert E. Modders, M.D., Frankenmuth (—)  
Z. Edin Taheri, M.D., Bay City (from Detroit)  
Arno W. Weiss, M.D., Saginaw (from Bad Axe)  
John W. Wood, M.D., Mt. Pleasant (from Military Service)

#### August, 1953

Earl M. Beardsley, M.D., Milan (from Maryland)  
E. F. Brasier, M.D., Mayville (from Munising)  
Jack H. Buck, M.D., Ionia (from Detroit)  
Paul W. Butterfield, M.D., Alpena (from Vermont)  
Malcolm L. Crump, M.D., Rogers City (from Detroit)  
Peter J. DeVries, M.D., Grand Haven (from Battle Creek)  
R. E. Gibson, M.D., Newberry (reopened) (—)  
John Halick, M.D., Greenville (from Illinois)

Carroll L. Jensen, M.D., St. Joseph (from California)  
Pieratt Johnson, M.D., Alma (from Grand Rapids)  
Finette M. Marzolf, M.D., Lansing (from Detroit)  
Richard Persons, M.D., Union City (from Greenville)  
F. L. Pierce, M.D., Dowagiac (from Detroit)

#### September, 1953

Burdette M. Berens, M.D., Lansing (from Residency)  
J. F. Cordes, M.D., Lansing (from Ann Arbor)  
Emile Etienne, M.D., Luna Pier (from Cincinnati)  
A. G. Goude, M.D., Hopkins (from Military Service)  
Blake Kutsche, W. F., M.D., Oscoda (from Saginaw)  
Robert M. Michels, M.D., Flushing (reopened) (from Military Service)

#### October, 1953

Donald A. Cairns, M.D., Mason (from Lansing)  
John Heneveld, M.D., retires (from Kalamazoo)  
Robert G. Heneveld, M.D., Muskegon Heights (from Muskegon)  
Robert Todd, M.D., Iowa, town unknown (from Crosswell)  
—Report of M.D. Placement Bureau, Michigan Health Council, 706 N. Washington Avenue, Lansing 6, Michigan.

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# Michigan's Department of Health

Albert E. Heustis, M.D., Commissioner

## STEPPED-UP TB CONTROL PROGRAM PROPOSED

Plans for an intensified tuberculosis control program that have been in preparation in the department for several months await only the increased budgetary support necessary before being put into operation.

Designed to meet the challenge of a persistently high incidence of reported cases of the disease in the face of a steadily falling death rate, the proposed program provides for increased facilities and activities for early finding of cases through (1) better epidemiological handling of cases and contacts, (2) the maintenance of a central register and (3) promotion of various forms of x-ray surveys including a pilot program of subsidizing general hospital admission x-rays. It provides also for prompt and adequate hospital care for all persons having the disease and for effective medical rehabilitation services.

From the standpoint of economy in government alone, the need for an all-out campaign of tuberculosis control is urgent. For the current year, it is estimated that state and county governments of Michigan will be required to spend approximately 19 million dollars for the treatment of persons having tuberculosis, with 85 per cent of those admitted to sanatoriums already in advanced stages of the disease.

## RECOMMENDATION ON POLIO VACCINE TESTING

A number of representative physicians were invited by the Commissioner to meet with him to consider the general subject of poliomyelitis vaccination, with particular attention to field testing studies.

The group approved in principle a field testing study of a killed tissue culture poliomyelitis virus vaccine (Salk) containing the three types of poliomyelitis virus to see whether or not it is effective in preventing paralytic poliomyelitis, provided that the National Institutes of Health of the United States Public Health Service certify in writing as to the safety of each lot of the vaccine to be used.

This statement will be presented to the State Council of Health at its meeting in January and also to the Commissioner's Advisory Committee of Local Health Officers before a final department policy is formulated.

## VITAL STATISTICS REPORT AVAILABLE

The annual statistical report of the Michigan Department of Health for the calendar year 1951, under the title, "Michigan Health Statistics . . . 1951" is now available for anyone interested. The report contains, in addition to the usual tables, effective graphic presentation of significant 1951 data and of "Michigan's Changing Health Picture . . . 1940-1951."

## COMMISSIONER'S CONFERENCE OF HEALTH OFFICERS

The Commissioner's annual three-day conference with local health officers, February 3 to 5, will continue to operate under four working committees, with the program planned and carried on by the health officers themselves. Major problems to be considered include accident prevention, school health services, chronic disease control and health problems associated with migrant labor,

## HOSPITAL RULES AND MINIMUM STANDARDS APPROVED

The combined new and revised rules and minimum standards for all Michigan hospitals have been approved by the State Council of Health and by the Attorney General.

## RABIES CENTERED IN DETROIT METROPOLITAN AREA

Of the 155 cases of rabies in animals reported in Michigan in 1953, a total of 114 were in the northern part of the Detroit Metropolitan Area. As usual, stray and, therefore, unvaccinated dogs are considered the major problem.

## FOR BETTER SCHOOL HEALTH SERVICES

Better co-ordination of the school health services given by four state agencies should result from a newly inaugurated series of Interagency Staff Meetings on School Health. Participating in the new program are the department of health, the department of public instruction, the department of mental health and the state board of alcoholism. At the first meeting of the group, mental health of the school age child was the subject discussed, with the department of mental health taking leadership and the other departments reporting the contributions they are making to that phase of school child health.

## "IF YOUR CHILD HAS A HEARING LOSS"

A new folder issued by the department, "If Your Child Has a Hearing Loss," is intended for parents of children with hearing losses or those suspected of having hearing losses. Copies are available upon request to local health departments or to the Michigan Department of Health.

## DIPHTHERIA IS STILL WITH US

Only twelve cases of diphtheria had been reported in the state during 1953 until five cases were reported from one school in a northwestern county and two from a town in a neighboring county during the last two weeks in December.

*A diet isn't fun, at best! Maybe that's why dieters usually benefit more if they like the prescribed foods.*



*This is another excellent reason for considering one or more of Borden's fresh dairy products when looking for the answer to a dietary problem.*

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FEBRUARY, 1954

*Say you saw it in the Journal of the Michigan State Medical Society*

207

## In Memoriam

**GEORGE H. CAMPAU, M.D.**, of Detroit, died November 2, 1953, at the age of sixty.

Dr. Campau was a member of a pioneer Detroit family which has been prominent in that city since the days of Cadillac, its founder.

A graduate of Wayne Medical School, Dr. Campau was on the staff at Providence Hospital. He was a veteran of World War I.

Dr. Campau is survived by his wife, Ruperta; a son, George H. Campau, Jr., and two daughters, Mrs. Joseph Maher and Jean Campau.

**CLARENCE A. CHRISTIANSON, M.D.**, of Dearborn, died November 22, 1953, at the age of sixty-one. He was founder, president and chief of staff of Dearborn Medical Center Hospital.

Dr. Christianson was born in St. Joseph, Michigan, but had lived in Dearborn for forty-seven years. He received both his B.S. and M.D. degrees from the University of Michigan.

For many years, he served as Health Officer for the community in which he practiced.

During World War I, Dr. Christianson served overseas with the United States Army and was discharged with the rank of Captain.

He was active in civic affairs and was a director of the Bank of Dearborn. Dr. Christianson was past president of the Dearborn Rotary Club and a member of the Veterans of Foreign Wars.

He is survived by his wife, Myrtle; a son, Clarence A., Jr.; a daughter, Mrs. James V. White of Bay City, and a brother, Harry.

**EDWARD O. LEAHY, M.D.**, of Jackson, died November 21, 1953, at the age of fifty-eight.

Dr. Leahy was born in Liberty Center, Ohio, and was graduated from high school in that city. Following completion of undergraduate study at Defiance College, he entered the University of Michigan Medical School, from which he was graduated in 1920.

Dr. Leahy interned at Foote Hospital, Jackson, carried on a general practice for two years in Grass Lake, and held a two-year residency at Manhattan Eye and Ear Hospital, before entering specialized practice in Jackson in 1924.

He was a member of the Detroit Otological Society.

Dr. Leahy is survived by his widow, Louine; two sons, Edward, of St. Louis, and Joseph, who is serving in the Air Force in England, and a daughter, Mrs. R. E. Lambert, of Ann Arbor.

**FREDERICK W. MC AFEE, M.D.**, of Detroit, died November 28, 1953, at the age of seventy-five.

Dr. McAfee had resided in Detroit for forty-nine years, starting practice there after his graduation from the University of Michigan Medical School in 1904. He was a native of Norwich, Ontario.

During World War I, he served as head of a medical detachment in France. He was past president of the Michigan Chapter of the 42nd Rainbow Division.

At the time of his death, he was with the City Physician's Office in Detroit.

He is survived by his wife, Mary Jane, and a daughter, Mrs. Eva May Ness.

**H. T. NEZWORSKI, M.D.**, of Ironwood, was killed December 2, 1953, when his automobile skidded on an icy road in Ontonagon County and hit a tree. He was forty-four years old.

Dr. Nezworski was born in Ironwood, where he completed his high school education. Both his undergraduate work and his medical study were at Marquette University, from which he received his M.D. degree in 1933. He had practiced in Ironwood since his internship, except for seven years on the medical staff of the Castile Mining Company at Ramsay.

Dr. Nezworski is survived by his wife, Dagny, and two children, Kathleen Ann and Henry Thomas, Jr. Also surviving are his mother, four brothers, and a sister. One brother, Louis, is a doctor of medicine in Eau Claire, Wisconsin.

**REU S. TAYLOR, M.D.**, Detroit, died November 22, 1953, at the age of seventy-seven.

Born in New Hudson, Michigan, Dr. Taylor had practiced medicine in Detroit for forty-five years.

Dr. Taylor was graduated in 1906 from the Detroit College of Medicine. He was on the staff of Booth Hospital.

Surviving Dr. Taylor are his wife, Esther, and four sons: Norman Taylor, D.D.S., of Montague; Wendell Taylor, M.D., of Bath; Spencer Taylor, and Sherman Taylor.

**ALVIN THOMPSON, M.D.**, who practiced urology in Flint for thirty-one years, died at his home, October 22, 1953. He was seventy-two years old.

Dr. Thompson was born in Racine, Wisconsin. He received his M.D. degree in 1912 from the University of Illinois Medical School and taught at Rush Medical College and Northwestern Dental School after his graduation. He moved to Flint in 1922 and was recognized as that city's first physician specializing in urology. He served on the staffs of all three major hospitals in Flint.

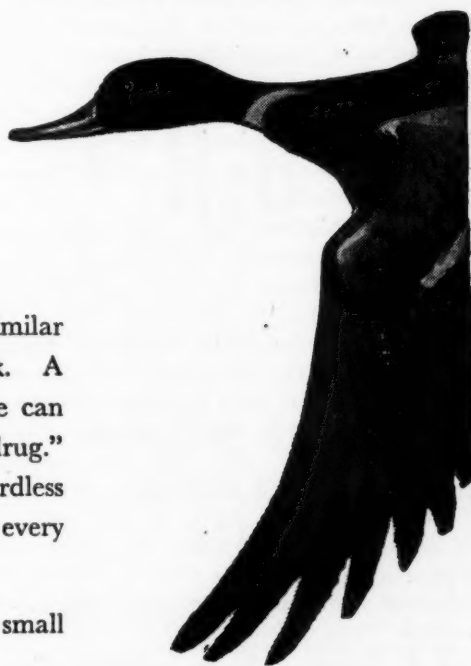
Dr. Thompson was president of the Genesee County Medical Society in 1936-37, and in 1945 was president of the Flint Academy of Surgery. He was a member of the American College of Surgeons and a Diplomate of the National Board of Urology. Before moving to Flint, he was secretary-treasurer of the Chicago Urological Society.

He is survived by his wife, Florence; a daughter, Mrs. Theodore Mattson of El Paso, Texas; a sister, and three grandchildren.



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## NEWS MEDICAL

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### MICHIGAN AUTHORS

Alexander Blain, III, M.D., Nester A. Flores, M.D., of Detroit, and Francis Gerbasi, M.D., of Ann Arbor, are authors of a paper entitled "Present Status of Peripheral Neurectomy for Pain in Obliterative Arterial Disease," published in *Journal of the American Geriatrics Society*, September, 1953.

James H. Maxwell, M.D., Robert W. Buxton, M.D., by invitation, and A. James French, M.D., by invitation, of Ann Arbor, are authors of an article entitled "Surgical Treatment of Parotid Gland Tumors" presented at the Fifty-seventh Annual Session of the American Academy of Ophthalmology and Otolaryngology, October, 1952, in Chicago, and published in *Transactions of the American Academy of Ophthalmology and Otolaryngology* for September-October, 1953.

Carey P. McCord, M.D., Ann Arbor, is the author of the third of a series of articles entitled "Lead and Lead Poisoning in Early America," published in *Industrial Medicine and Surgery*, December, 1953.

Rose H. Parker, M.D., Edgar A. Kahn, M.D., and Vivian Iob, Ph.D., Ann Arbor, are authors of an article entitled "Thoracic Duct Ligation During Supradiaphragmatic Splanchnic Section: Effect on Hypertension and Liquid Transport" published in the *University of Michigan Medical Bulletin*, November, 1953.

Robert C. Bassett, M.D., of Ann Arbor, is the author of an article entitled "Some Developmental Aspects of Vascular Lesions in the Central Nervous System" published in *University of Michigan Medical Bulletin*, November, 1953.

J. F. Palmer, A.B., A. L. Drew, M.D., and M. B. Chenoweth, M.D., Ann Arbor, are authors of an article entitled "Tissue Copper Determinations in a Case of Hepatolenticular Degeneration Treated with BAL (Dimercaprol)," published in *University of Michigan Medical Bulletin*, November, 1953.

J. S. De Tar, M.D., Milan, is the author of an article entitled "General Practice in a Small Town Area" published in the *Journal of the Student American Medical Association*, December, 1953.

H. E. Pedersen, M.D., and A. J. Day, M.D., Detroit, are authors of an original article on "Dupuytren's Disease of the Foot" which appeared in *JAMA*, January 2, 1954.

Henry H. Black, Battle Creek, is the author of an article entitled "Business Management of Medical Practice," published in the *Pennsylvania Medical Journal*, December, 1953.

John M. Hammer, M.D., F.A.C.S., F.I.C.S., and Patrick H. Seay, Ph.D., Kalamazoo, with Edward J. Hill, M.D., F.A.C.S., and Frank Prust, M.D., Detroit, are the authors of an article entitled "Surgical Uses of Viable Intestinal Segments" published in the *Journal of the International College of Surgeons*, November, 1953.

Geza Schinagel, M.D., F.A.C.S., F.I.C.S., Detroit, is the author of an article entitled "Incidental Urogenital Pathologic Conditions Associated with Traumatic Urogenital Emergencies," published in the *Journal of the International College of Surgeons*, November, 1953.

S. E. Gould, M.D., H. J. Gombert, Ph.D., and F. H. Bethell, M.D., from the Atomic Energy Commission Laboratory on Biological Effects of Irradiation, the Michigan Memorial-Phoenix Project, and the Department of Pathology, University of Michigan, Ann Arbor; and Departments of Pathology, Wayne County General Hospital, Eloise, and Wayne University College of Medicine, Detroit, are authors of an article entitled "Prevention of Trichinosis by Gamma Irradiation of Pork as a Public Health Measure," published in *American Journal of Public Health* and the *Nation's Health*, December, 1953.

Robert W. Buxton, M.D., Ann Arbor, is the author of an article entitled "Squamous Cell Anal Carcinoma" published in *AMA Archives of Surgery*, December, 1953.

Jere M. Bauer, M.D., Ann Arbor, and Jerome W. Conn, M.D., Ann Arbor, are authors of an article entitled "Werner's Syndrome—A Study of Adrenocortical and Hepatic Steroidal Metabolism" published in the *Texas State Journal of Medicine*, December, 1953.

R. C. Mochlig, M.D., and A. L. Steinbaugh, M.D., Detroit, are authors of an original article on "Cortisone Inference with Calcium Therapy in Hypoparathyroidism" which appeared in *JAMA*, January 2, 1954.

Maurice H. Seevers, M.D., Ph.D., Ann Arbor, is the author of an article entitled "Perspective Versus Caprice in Evaluating Toxicity of Chemicals in Man," published in *The Journal of the American Medical Association*, December 12, 1953.

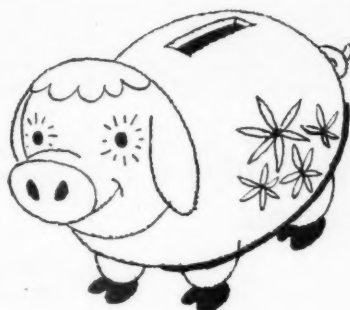
(Continued on Page 212)

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(Continued from Page 210)

Garner M. Byington, M.D., San Jose, California (formerly of Detroit, Michigan), is the author of an original article on "Educational Program for Nursing Supervisors in Maternity Hospitals: The Physician's Standpoint" which appeared in the *American Journal of Public Health*, September, 1953.

\* \* \*

Michigan Medical Service reports that during the year 1952 there were 646,797 Service reports received and processed. That is there were 646,797 actual services rendered to contract holders. During the year 1953 there was a 23 per cent increase or 794,644 services rendered. There was only a 14 per cent increase in numbers of subscribers. Utilization of the plan was increased by the difference, or 9 per cent. This is an item our membership, both doctors and subscribers, must consider, as it definitely indicates a necessary increase in rates or decrease in services. This work is not done for nothing. It is the subscriber who pays the bill.

In 1953, Michigan Medical Service paid to the doctors for services in the Medical and Surgical plans \$23,173,545.06 and for VA \$850,097.75, or a grand total of \$24,023,442.81. This compares with the year 1952 \$21,439,541.10: \$974,143.00 and a grand total of \$22,413,648.10.

Seventy-eight per cent of all anesthetics given in the State of Michigan and paid for by the Service plans are given by lay anesthetists, and paid through Michigan Hospital Service, the other twenty-two per cent are given by doctors and are paid through Michigan Medical Service.

\* \* \*

The fourteenth annual Parent Institute of the Nursing School, Michigan School of the Deaf, will be held in Flint, March 28 through April 3, 1954. It is planned for hearing-impaired preschool children and their parents.

The program for the parents, consisting of classes, observations, consultations, scheduled tours and lectures, has been planned to assist parents with their child during the preschool years. There is much parents can do to train their child during these early years and help him to develop habits and patterns which will be important to him throughout his life.

The program for the children is one of attendance at a nursery school to help start them on the road to new experiences in learning.

Attendance is open to any mother or father (or both) of this State and their deaf or hard-of-hearing preschool child. Educators, rehabilitation workers, and other interested individuals are welcome to attend any or all meetings listed in the program. There will be no charge.

\* \* \*

The Institute of Industrial Health and the School of Public Health at the University of Michigan on October 21, 1953, sponsored a conference for physicians, attorneys

(Continued on Page 214)



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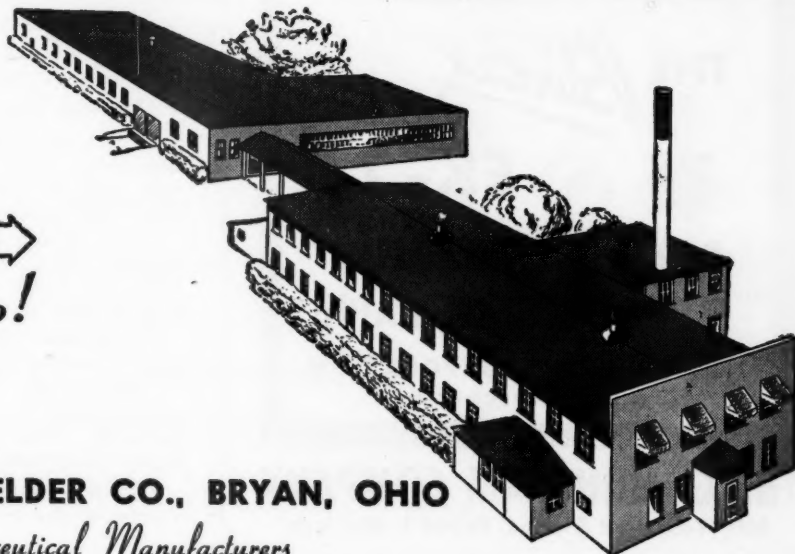
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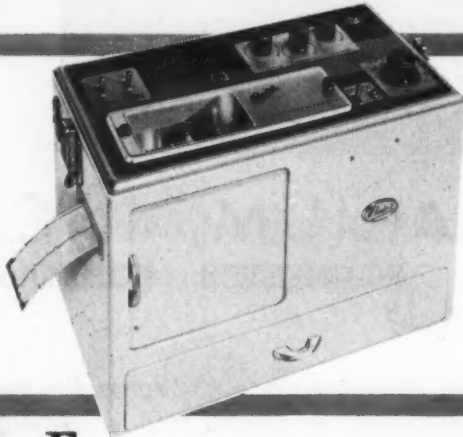
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FEBRUARY, 1954

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(Continued from Page 212)

and industrial hygienists on expert and technical testimony.

At the planning stage of this conference, the enterprise was regarded as unlikely to attract any wide concern or any large audience. To the contrary, at the actual time of this conference an overflow crowd flatly exceeded all facilities. It becomes strikingly apparent that here is a topic of outstanding appeal both to physicians and attorneys and thus invites consideration in future planning of scientific programs by medical and legal organizations.

Outstanding in this conference were the following presentations and their speakers: Mr. Buell A. Doelle: Attorneys, Technical Witnesses and The Courts (The Keynote Address); Dr. Edward D. Spalding: The Physician's Obligations to the Courts; Mr. T. Donald Wade: Preparation of the Technical Witness Prior to Court Appearance; Dr. Theo. J. Curphey: The Medical Preparation of a Medical-Legal Case; Dr. Eli Sherman Jones: The Use of Scientific Records and Exhibits in the Court Room.

The evening session of this one-day conference was a demonstration of the poorly equipped technical witness and his type of damaging testimony versus the highly skilled expert witness making distinct contribution to the court activity and thus serving the judge or jury in the reaching of a just decision.

Manuscripts from the entire program are in process of publication and are available through the School of Public Health at the University of Michigan.

While the unexpected display of interest in the need for and the techniques of expert testimony may impose upon the University of Michigan groups to repeat this program, it appears that many other medical and legal organizations on a nation-wide basis may do well to make available to those concerned similar programs.

(EDITOR'S NOTE.—Two of these papers are being presented in this number of *THE JOURNAL*, the one by Dr. Spalding having been received just two days before his murder.)

\* \* \*

The December 4 issue of the Armed Forces newspaper, *Stars and Stripes*, contained an interesting story from Bonn which said that Germany has an army of 30,000 jobless or partially jobless doctors.

"There are 4,543 West German doctors unemployed or dependent on odd jobs outside their profession," the story said, adding: "Doctors are working as construction laborers, jazz musicians and circus roustabouts."

"An additional 18,000 German doctors have all but deserted the medical field for other careers. . . . Finally there are 8,000 postgraduate medical students working without pay as interns."

"Why don't these doctors try their luck and take the risk of starting the life of a private practitioner?"

"The answer is the traditional German system of public health insurance, a system which has existed since Bismarck. Today, four out of five families are insured under the system."

The newspaper explained in great detail the inadequacies of the system as it exists today.

(Continued on Page 216)

# NEW HEADQUARTERS



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## NEWS MEDICAL

(Continued from Page 214)

East Germany, ironically, is critically short of doctors, there being only one doctor for every 2,000 inhabitants. Further, the newspaper said, food shortages and long working hours decreed by the East-zone Communist regime have brought a serious increase in illness.—From AMA Secretary's Letter, January 8, 1954.

\* \* \*

The American Hospital Association polled members of its House of Delegates recently and found little evidence to show that there would be a leveling-off of hospital costs during 1954. The administrators reported that the major factors which they believed would contribute to a continuation of increased operating costs were payrolls and costs of supplies. A number of those who responded said that the gradual reduction in hospitals from a 48-hour and a 44-hour work week to a 40-hour schedule would be reflected in higher operational costs.

\* \* \*

The American Cancer Society, at its recent annual dinner meeting, adopted a resolution expressing appreciation for the television program "The Fight Against Cancer," one of the programs in the March of Medicine series sponsored jointly by Smith, Kline & French Laboratories, of Philadelphia, and the American Medical Association, over the NBC-TV network.

\* \* \*

The Foundation of the American Society of Plastic and Reconstructive Surgery, Inc., announces its Fifth Annual Scholarship Contest with two main prizes offered,

each consisting of a three months' plastic surgery scholarship with full maintenance in a number of selected leading services in the United States and abroad. The contest is restricted to surgeons in practice no longer than five years and to residents in training.

For information on this essay contest, write Chairman Jacques W. Maliniac, M.D., 30 Central Park South, New York, N. Y.

\* \* \*

The Sixth Annual Convention of the International Academy of Proctology will be held at the Palmer House, Chicago, April 8-11, inclusive. For program, write the Academy at 43-55 Kissena Boulevard, Flushing, New York. The Academy also announces its Annual Cash Prize and Certificate of Merit Award contest (\$100).

\* \* \*

Wm. J. Stapleton, Jr., M.D., Detroit, Michigan's Foremost Family Physician, will be honor guest at the 1954 Annual Meeting of the Wayne University Medical School Alumni. The dinner honoring Dr. Stapleton will be held at the Fort Shelby Hotel, Tuesday, May 4, 1954.

\* \* \*

The American Geriatrics Society will hold its 11th Annual Meeting at the Hotel Fairmont, San Francisco, June 17-19 (immediately preceding the AMA Annual Session). For programs and full information, write Laurance W. Kinsell, M.D., 2701 Fourteenth Avenue, Oakland 6, California.

\* \* \*

The Upper Peninsula Medical Society will hold its



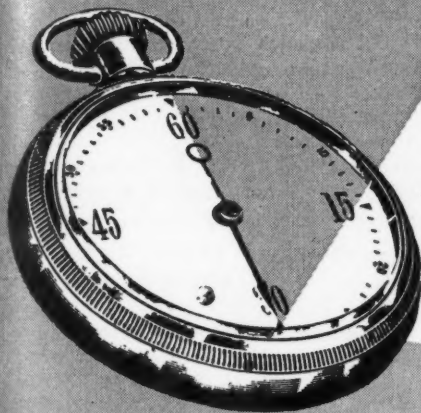
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59th Annual Convention in Menominee, June 18-19, 1954. Speakers on the program include such luminaries as:

Allan Barnes, M.D. (Obstetrics), Cleveland; Harry Beckman, M.D. (Therapeutics), Milwaukee; M. R. Burnell, M.D. (Internist), Flint; Richard B. Capps, M.D. (Internist), Chicago; James Conway, M.D. (Pediatrics), Milwaukee; Joseph Gale, M.D. (Surgery), Madison; Adolph Sahs, M.D. (Neurology), Iowa City; John Schindler, M.D. (Psychiatry), Monroe, Wisc.

All members of the Michigan State Medical Society are cordially invited to attend the always enjoyable and instructive meeting of the Upper Peninsula Medical Society.

\* \* \*

Kenneth H. Johnson, M.D., Vice Speaker of the MSMS House of Delegates, is a busy Lansing practitioner who has his share of obstetrical cases. Therefore, the following telegram, addressed to William Bromme, M.D., Chairman of the MSMS Council, was received with sympathetic appreciation by members on the occasion of the December 17 Executive Committee of The Council meeting in Detroit:

"Regret inability to attend today's meeting.  
Labor trouble.—KENNETH H. JOHNSON, M.D."

\* \* \*

L. W. Shaffer, M.D., Detroit, recently was given high honor by being elected President of the American

Venereal Disease Association (formerly American Neisserian Medical Society).

Congratulations, Dr. Shaffer.

\* \* \*

Angus McLean, Award.—The Academy of Surgery of Detroit offers the Angus McLean Prize Award of \$200 for the best essay on a surgical problem submitted by a resident or an intern of a hospital in the Greater Detroit area by March 1. For information, write Howard T. Howlett, M.D., 868 Fisher Bldg., Detroit 2, Michigan.

\* \* \*

The Andrew S. Brunk Award has been created by the Michigan Health Council in memory of the late Dr. Brunk, President of the Michigan State Medical Society in 1944-45 and first President of the Michigan Health Council. The award will be presented for the outstanding community health council accomplishment of the year in Michigan.

\* \* \*

The Third International Congress of Internal Medicine will be held in Stockholm, Sweden, September 15-18, 1954 under the auspices of the International Society of Internal Medicine. Professor Nanna Svartz, Caroline Medical Institute, Stockholm, is Congress Committee Chairman.

\* \* \*

The American Cancer Society announces that Schenley Laboratories, Inc., has returned to its early penicillin strains to assist Ivor Cornman, M.D., of George

## NEWS MEDICAL

Washington University, in a search for an anti-cancer factor which has been found to kill cancer cells in test tubes without killing healthy tissue. The investigations are being conducted under the sponsorship of the American Cancer Society and the National Cancer Institute of Bethesda, Md.

\* \* \*

The Third Interim Congress of the Pan American Association of Ophthalmology will be held at Sao Paulo, Brazil, June 17-21, 1954.

For program, write Professor Moacyr E. Alvaro, 1151 Consolacao, Sao Paulo.

\* \* \*

Harry J. Loynd, President of Parke, Davis & Company, Detroit, predicts significant medical advances to strengthen the nation's health in the year 1954. "In the year ahead, and in the next decade, lies a great new world of expanded professional service. We are confident our industry has the vision and foresight to meet this challenge with intelligent planning and production," stated Mr. Loynd, in commenting on the greatest population boom in U. S. history. "As a result of health and medical advances in recent years," stated Mr. Loynd, "there are 12½ million persons over sixty-five now, and it is estimated there will be 16 million by 1960."

\* \* \*

Over 180,000 babies were born in Michigan in 1953—the all-time record. At the same time, the death rate reached an all-time low of less than 9 per 1,000. Mater-

nal deaths were at their lowest point, dropping below .5 per 1,000 live births.

What are similar statistics in those countries which have "enjoyed" socialized medicine for the past ten years or longer?

\* \* \*

**Cancer Fiction!** Anent the current discussion regarding smoking having a possible connection with the increase in incidence of cancer of the lung, have you heard of the cancer survey in a neighboring state which unearthed a great increase in the incidence of rectal cancer?

The researchers found that every one of these affected used toilet paper—so a law is being drafted.

\* \* \*

The Trudeau School of Tuberculosis at Saranac Lake, New York, will present its fortieth annual session, beginning Tuesday, June 1, and concluding June 25. According to the Michigan Tuberculosis Association, the course will cover all aspects of pulmonary tuberculosis and also certain phases of other chronic chest diseases, including those of occupational origin.

Registration is limited. Tuition fee is \$100.00, payable to the Trudeau School on or before June 1, 1954. The Trudeau School of Tuberculosis has been approved for training of Veterans under Public Laws and those desiring to obtain Veteran's benefits should clear their registration with the Veterans Administration before the session begins. A few scholarships also are available to

(Continued on Page 220)

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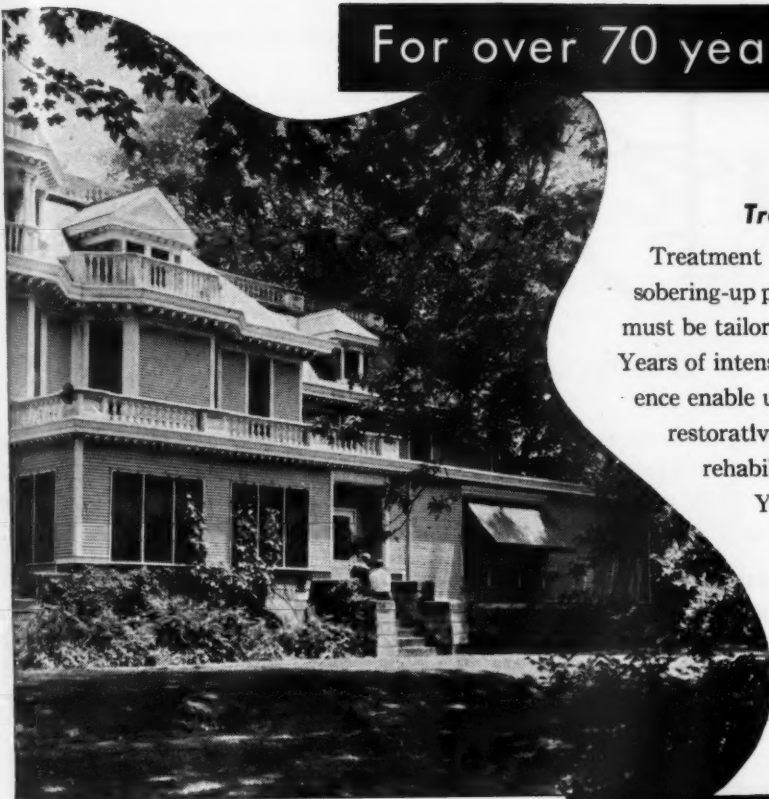


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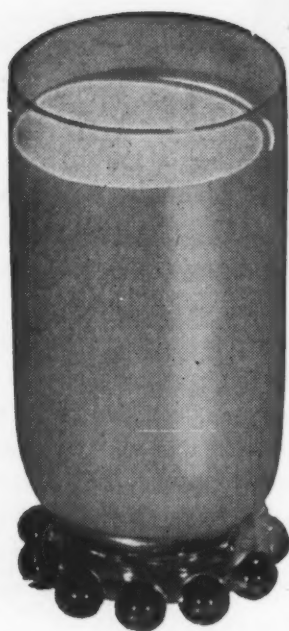
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**EBLING CREAMERY**

(Continued from Page 218)

those physicians qualifying. Communications should be addressed to: Secretary, Trudeau School, Saranac Lake, New York.

\* \* \*

The AMA adopted a resolution regarding the late E. D. Spalding, M.D., at the Interim meeting in St. Louis, Missouri, December 3, 1953, as follows:

WHEREAS, Edward D. Spalding, M.D., an Alternate Delegate representing the Michigan State Medical Society to the AMA House of Delegates, was shot and killed as he departed from his office in Detroit to attend this Clinical Session of the AMA House of Delegates and

WHEREAS, at past sessions of this House, Dr. Spalding always was inspiring in his earnestness and loyal in attending to the duties assigned to him by the Michigan Delegation to the AMA House of Delegates, and

WHEREAS, Dr. Spalding as an active practitioner of medicine, was a brilliant clinician as well as a militant leader in his espousal of private practice as opposed to compulsory schemes inimical to patients' welfare, therefore be it

RESOLVED, that the AMA House of Delegates in session in St. Louis, December 2, 1953, express its deep sense of loss in the tragic and abrupt passing of E. D. Spalding, M.D., and bespeaks its sincere sympathy to his survivors, and be it further

RESOLVED, that a copy of this Resolution be prepared and be forwarded to Mrs. Spalding and the Spalding family.

\* \* \*

The establishment of a three-year \$15,000 fellowship for post-doctorate training in the science of nutrition was announced January 15 by the National Vitamin

Foundation. The fellowship will be known as the Russell M. Wilder Fellowship, honoring Dr. Wilder, Rochester, Minnesota, recently retired Director of the National Institute of Arthritis and Metabolic Diseases of the National Institute of Health. Candidates may apply to the National Vitamin Foundation, 15 E. 58th Street, New York 22, N. Y., for application forms, on or before March 15, 1954.

The Medical Advisory Committee of the Michigan Chapter, Arthritis and Rheumatism Foundation, will have a dinner and business meeting on Thursday evening, March 11, 6:30 p.m., in Parlor F in the Sheraton-Cadillac Hotel, Detroit. This meeting will be held in conjunction with the Michigan Clinical Institute.

Ralph W. Shook, M.D., Kalamazoo, a member of The Council of the Michigan State Medical Society, became President of the Kalamazoo Academy of Medicine for the current year at the Academy's recent annual meeting. E. Gifford Upjohn, M.D., was chosen President-Elect.

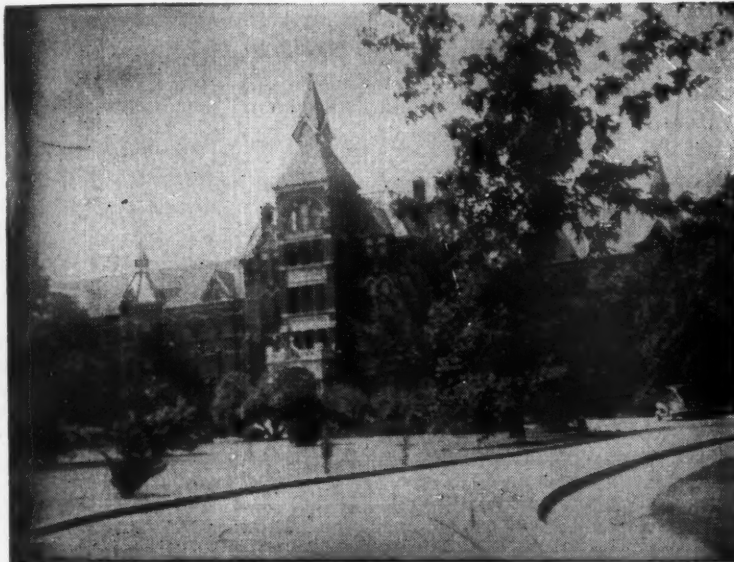
\* \* \*

F. L. Covert, M.D., of Gaines, was honored recently by the Durand (Michigan) Rotary Club for forty-three

(Continued on Page 222)

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Anesthetic in Hospital.....	10.00	20.00	30.00	40.00
X-Ray in Hospital.....	10.00	20.00	30.00	40.00
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Ambulance to or from Hospital.....	10.00	20.00	30.00	40.00

**COSTS (Quarterly)**

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Child to age 19.....	1.50	3.00	4.50	6.00
Child over age 19.....	2.50	5.00	7.50	10.00

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FEBRUARY, 1954

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221

# KG

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years of service in the medical field that Dr. Covert performed for his community. A special plaque was presented to him during the meeting for always doing something for others—never thinking of himself—"for unselfish service to the people of this community."

American College of Surgeons, Michigan Chapter, will hold an all-day clinic and dinner meeting on Tuesday, March 9, 1954, during the Michigan Clinical Institute. The meeting will be held in the Grand Ballroom of the Sheraton-Cadillac Hotel, Detroit.

### Program:

Registration—8:00-8:30 a.m.

### Morning Session—9:30 a.m.

Diagnosis of Tumors of the Neck—Harry C. Saltstein, M.D., Detroit  
Surgical Treatment of Aortic Stenosis. A Report of Seven Cases—Conrad R. Lam, M.D., Detroit  
Visualization of Coronary Sinus Graft and Venous Pathways of the Heart in the Living Dog. Back operation II—A. Johnson, M.D., Detroit  
Comprehensive Management of the Post Thrombophlebitic Syndrome—Alexander Blaine, III, Detroit

### Discussion

Gastric Lymph Sac—Dayton O'Donnell, M.D., Detroit  
Five-Year Discussion of Subtotal Gastric Resection—Kenneth Campbell, M.D., Detroit  
Heterotopic Gastric Pancreatic Tissue—John Reid Brown-Nathan Berkson, M.D. Presented by Dr. Berkson, Detroit  
Esophageal Hiatal Hernia—Ruben I. Shapiro, M.D., Detroit

### Discussion

Luncheon—12:00 Noon

### Afternoon Session—2:00 p.m.

The Injured Hand, Its Treatment and Rehabilitation—Joseph Posch, M.D., Detroit  
Complications and Dislocations of the Hip—Sylvester O'Conner, M.D., Ann Arbor  
Intramedullary Fixation and Fractures—Franklin Wade, M.D., Flint, Mich.  
Kidney Injuries—Elwood Jenkins, Detroit

### Discussion

Calhoun County Medical Society Cancer Registry Progress Report—James W. Herbly, M.D., Battle Creek  
Splenectomy—A. B. Hodgman, M.D., Kalamazoo  
Dupuytren's Contracture of the Foot—M. E. Pedersen, M.D., Detroit

### Discussion

Business Meeting

Evening Activities—6:30 p.m.

Cocktails

Banquet—Speaker—Dr. Frederick Coller. Subject: Wm. Beaumont, M.D.

All Michigan Clinical Institute registrants are cordially invited to attend the scientific program and the banquet.

For further information, write E. A. Osius, M.D., 901 David Whitney Bldg., Detroit.

# NEWS MEDICAL

**Michigan Speakers at AMA Clinical Session** in St. Louis, Mo., were: Carl F. List, M.D., Grand Rapids, on "Relief of Intractable Pain"; Reed M. Nesbit, M.D., Ann Arbor, on "Surgically Remedial Congenital Urogenital Defects"; Chas. M. Stevenson, M.D., Detroit, on "Pelvic Inflammatory Disease"; P. S. Barker, M.D., Ann Arbor, Moderator of Panel on "Coronary Heart Disease and Angina Pectoris"; S. W. Hoobler, M.D., Ann Arbor, Member of Panel on "Modern Concepts in Management of Hypertension," and H. Marvin Pollard, M.D., Ann Arbor, on "The Role of Cortisone and ACTH in Gastrointestinal Lesions."

\* \* \*

The American Academy of General Practice meets in the Cleveland Auditorium, Cleveland, Ohio, March 22-25, 1954. Sir Alexander Fleming, of London, discoverer of penicillin, will be one of the luminaries on a star-studded program. The President's Reception at the Cleveland Hotel, March 24, will give registrants an opportunity to greet Sir Alexander and Lady Fleming and the other distinguished speakers, including E. J. McCormick, M.D., Toledo, President, American Medical Association.

\* \* \*

Michigan Medical Service Board of Directors will meet on March 31, May 12, July 17, September 15, and October 13, 1954.

The Blue Cross-Blue Shield National Conference will be in New York City, April 4 to 8, 1954.

\* \* \*

Michigan doctors attending the AMA Clinical Session in St. Louis were:

W. W. Babcock, M.D., Detroit; L. R. Banner, M.D., Kalamazoo; P. S. Barker, M.D., Ann Arbor; Helen S. Barnard, M.D., Muskegon; W. D. Barrett, M.D., Detroit; S. A. Beckwith, M.D., Stockbridge; C. F. Boothby, M.D., Hartford; A. P. Brachman, Jr., M.D., Allegan; Wm. Bromme, M.D., Detroit; Louis Carbone, M.D., Detroit; J. S. DeTar, M.D., Milan; C. H. Flint, Jr., M.D., Hart; L. Fernald Foster, M.D., and J. R. Franck, Jr., M.D., Wakefield.


H. H. Gay, M.D., Midland; Alex Gaynor, M.D., Detroit; L. E. Grate, M.D., Charlevoix; J. M. Hammer, M.D., Kalamazoo; S. W. Hoobler, M.D., Ann Arbor; W. A. Hudson, M.D., Detroit; L. W. Hull, M.D., Detroit; W. H. Huron, M.D., Iron Mountain; F. P. Husted, M.D., Bay City; W. A. Hyland, M.D., Grand Rapids; R. A. Johnson, M.D., Detroit; D. J. Kilian, M.D., Midland; A. A. Klein, M.D., Detroit; and Theodore Kolvoord, M.D., Battle Creek.

C. F. List, M.D., Grand Rapids; T. B. Mackie, M.D., Sault Ste. Marie; D. R. Mouw, M.D., Grand Rapids; G. C. Penberthy, M.D., Detroit; R. T. Polack, M.D., Howell; B. H. Priborsky, M.D., Detroit; Morris Raskin,

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FEBRUARY, 1954

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M.D., Detroit; S. G. Reisman, M.D., Detroit; J. R. Rodger, M.D., Bellaire; G. W. Slagle, M.D., Battle Creek; C. S. Stevenson, M.D., Grosse Ile; J. H. Teusink, M.D., Cedar Springs; E. C. Texter, M.D., Detroit; Jean K. Weston, M.D., Detroit; R. F. Weyher, M.D., Detroit; W. R. Wreggit, M.D., Highland Park; J. F. Wurzb, M.D., Grand Rapids; Ken Yamasaki M.D., Detroit, and W. A. Young, M.D., Inkster.

\* \* \*

Conference for residents, interns and senior medical students of Michigan has been arranged by the Michigan Clinical Institute for Wednesday, March 10, 1954, in Parlors G-H-I, Sheraton-Cadillac Hotel, Detroit. Wm. Bromme, M.D., Detroit, will act as chairman.

The program, which starts at 2:30 p.m., with registration, top of stair, fifth floor, includes the following papers:

"Mechanics of Setting Up a Practice" by Warren R. Mullen, M.D., Pentwater, Michigan, Past President of Student American Medical Association.

"Public Relations" by L. Fernald Foster, M.D., Bay City, Secretary, Michigan State Medical Society.

Discussion

"Michigan Medical Service and the Doctor" by R. L. Novy, M.D., Detroit, President, Michigan Medical Service.

Cocktails, courtesy of Michigan Medical Service, will be served at 5:30 p.m., immediately following the scientific program.

### RECENT ACTIVITY IN THE PLACEMENT BUREAU

The following physicians have recently located in the towns named, coming from cities noted in parentheses; through services of the Placement Bureau:

Levine, Bernard, M.D.	Oak Park	(———)
Lee, Frank, M.D.	Burr Oak	(Detroit)
Steele, Wm., M.D.	Thompsonville	(Mesick)
Serniak, John A., M.D.	Yale	(Detroit)
Holcolm, Wm. D., M.D.	Grass Lake	(Ann Arbor)
Smith, Robert O., M.D.	Ionia	(Detroit)
Niekamp, Harold M.D.	Utica	(Detroit)
Wiley, Philip K., M.D.	Elk Rapids	(Colorado)
Allott, Hugh R., M.D.	Sault Ste. Marie	(Penna.)
Goding, R. F., M.D.	Dexter	(Kalamazoo)
Allen, R. B., M.D.	Dexter	(Flint)
Andros, Geo. J., M.D.	Lansing	(Chicago)
Gustin, Ralph, M.D.	Berrien Springs	(Na. Dak.)
Scott, John, M.D.	Frankfort	(Detroit)

The Placement Bureau is an activity of the Michigan Health Council, 706 N. Washington, Lansing, Michigan (Telephone 4-7665).

### POSTGRADUATE COURSE IN OTOLARYNGOLOGY

The Department of Postgraduate Medicine, University of Michigan Medical School, announces the Otolaryngology Conference to be given at the University Hospital, Ann Arbor, Michigan, April 15, 16 and 17, 1954, under the direction of Dr. A. C. Furstenberg,



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Competent medical direction and experienced nurses.

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Philip Neudeck, *Vice-President*  
Chas. L. Kendrick, *Secretary*  
T. Allen Smith, *Treasurer*  
Dr. Charles S. Kennedy  
Hon. Miles N. Culehan  
Jack Schafer  
Nathaniel L. Goldstick  
Benjamin Burdick  
Carolyn Fenwick  
Comm'r. Donald Leonard  
Hon. W. McKay Skillman  
Milton Petrie

The Michigan Alcoholic Rehabilitation Foundation is a non-profit organization devoted to the proper hospitalization of alcoholics seeking to stop drinking.

Contributions to the Foundation are deductible and should be sent to 2379 National Bank Bldg., Detroit 26, Michigan.

Chairman of the Department of Otolaryngology at the University of Michigan Medical School.

*Guest Lecturers.*—Dr. J. A. Hilger, St. Paul, Minn.; Dr. H. P. Schenck, Philadelphia; Dr. Paul Holinger, Chicago; Dr. K. M. Day, Pittsburgh; and Dr. Lawrence R. Boies, Minneapolis, Minn.

*Resident Lecturers.*—Dr. A. C. Furstenberg, Dr. J. H. Maxwell, Dr. J. E. Magielski, Dr. Thomas Francis, Dr. Jerome Conn, Dr. E. R. Harrell, Jr., Dr. R. B. Sweet, Dr. H. E. Sloan, Jr., and Dr. Irving Blatt.

For further information, address: Dr. H. H. Cummings, Chairman, Department of Postgraduate Medicine, University Hospital, Ann Arbor, Michigan.

### DINNER HONORING DR. STAPLETON—MAY 11

A testimonial dinner honoring Dr. William J. Stapleton, Jr., will be held in the Grand Ballroom in the Sheraton-Cadillac Hotel on Tuesday evening, May 11. A reception in the Italian Garden will precede the dinner.

Dr. Stapleton will be honored as Michigan Physician of the Year and also as a scholar and teacher. As former acting Dean of the Wayne University College of Medicine and now Professor Emeritus, he has annually prepared a review of 100 books for the physician. His reviews are published in the *Detroit Medical News*.

The subscription dinner will be arranged by a committee under the chairmanship of Don W. McLean, M.D., 1066 Fisher Building, Detroit 2, representing the Wayne University College of Medicine Alumni Association.

"All members of the medical profession and lay friends of Dr. Stapleton are cordially invited to attend," stated Dr. McLean.

FEBRUARY, 1954

### MICHIGAN REGISTRATIONS IN MEDICINE

(Continued from Page 150)

igan), Wyman C. Cole, Jr. (*University of Wayne*), Serafeim P. Masouredis (*University of Michigan*), Kenneth Israil (*University of Michigan*), Loyal W. Lodar (*University of Wayne*), Romuald H. Gomley (*University of Michigan*), Willis E. Gouwens (*University of Chicago*), Warren S. Witus (*University of Michigan*), Lawrence H. Feenstra (*University of Michigan*), Wm. F. B. Kutsche (*University of Wayne*), John T. Clymer (*University of Michigan*), Gail L. Hale (*University of Wayne*), John C. Smithson (*University of Michigan*), Wm. P. Edmunds (*University of Michigan*), Adam C. McClay (*University of Michigan*), Evon R. Williams (*University of Northwestern*), Andrew J. Wood (*University of Howard*), Harvey J. Bratt (*University of Michigan*), Norman A. Gremel (*University of Michigan*), Jose M. Siero (*University of Nicaragua*), John V. Kelly (*University of Wayne*), David W. Williams (*University of Oregon*), Herman Eldersveld (*University of Michigan*), Robert V. Anderson (*Jefferson*), Wm. C. Bailey (*University of Wayne*), Margaret Dietze (*University of Pittsburgh*), John F. Fea (*Loyola*), Ben Fisher (*University of Illinois*), Leo B. McSherry, Jr., (*Loyola*), Burwell Seymour (*Western Ontario*), Charles H. Steele (*University of Alabama*), Ralph M. Stephan (*University of Chicago*), Bruce T. Wheatley (*University of Wayne*), Arthur R. Abbin (*University of Michigan*), Asa W. Springer, Jr. (*University of Wayne*), Jerome J. VanGasse (*University of Michigan*), Donovan F. Hinchman (*University of Michigan*), Donald C. Camp (*University of Michigan*), Richard D. Judge (*University of North-Western*), Robert F. Thimmig (*University of Marquette*), Lewis T. Warren (*University of Michigan*), Andres D. Resto-Soto (*University of Michigan*), Avis Margaret Olson (*University of Manitoba*), Lawrence E. Grennan (*University of Wayne*).

## THE DOCTOR'S LIBRARY

*Acknowledgment of all books received will be made in this column, and this will be deemed by us as full compensation to those sending them. A selection will be made for review, as expedient.*

**DISABILITY EVALUATION.** Principles of Treatment of Compensable Injuries. Earl D. McBride, B.S., M.D., F.A.C.S. Assistant Professor in Orthopedic Surgery, University of Oklahoma School of Medicine; Attending Orthopedic Surgeon to St. Anthony's Hospital; Associate Orthopedic Surgeon to Wesley Hospital; Visiting Surgeon to W. J. Bryan School for Crippled Children; Chief of Staff to Bone and Joint Hospital, Oklahoma City, Oklahoma. 375 figures. Fifth edition. Philadelphia, London, Montreal: J. B. Lippincott Company. Price \$15.00.

The new edition of Doctor McBride's popular treatise on compensable injuries has been enlarged and improved to expand the medical treatment of the injured workman as a social responsibility, and to aid the physician handling industrial work perform his duty to the patient and the employer more efficiently in the current growth of industrial laws. His enlarged injury charts establish a scientific basis for evaluating the end results of injury when mathematical or monetary values are involved.

Excellent charts, with accompanying explanation, illustrate the author's method of determining disability which is based on the measurement of function in respect to general working capacity. The type of patient ex-

amination necessary to prepare for testimony in court is stressed, with an excellent chapter on the detection of malingering. The discussion on evaluating permanent disability, including a method of rating fracture results is most complete. Routine examination of the back is well illustrated and discussed, and is accompanied by a fine outline for the differential diagnosis of backache. The rating schedule of partial permanent disability has been enlarged.

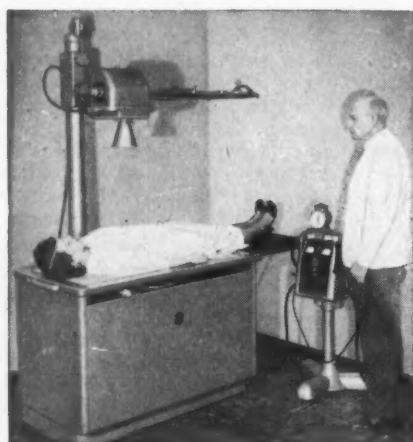
A new feature of the book is a chapter on causal relation of injury, disease and disability in which the author covers a wide range of mental and physical diseases which have been attributed to occupation, and the effect of trauma upon pre-existing disease, such as arthritis. The examining doctor's part in the employment of the disabled person is discussed, with charts and tests which aid the appraisal of an individual's physical capacity versus the physical demands of the job. This is an important reference book for any physician who treats industrial cases.

S.B.W.

**CURE YOUR NERVES YOURSELF.** By Louis E. Bisch, B.A., M.D., Ph.D. New York: Wilfrid Funk, Inc., 1953. Price \$3.50.

This is another of those self-help books that have become quite plentiful. The author begins with an apologetic explanation of the need for another book of this type. If he is correct in his ideas, then the remedy for most neurosis would be solved by more librarians and

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fewer physicians, or the physician could simply hand out books and cure his neurotic patients. In a book of this sort, the remarks necessarily have to be general, and we find the usual psychological patter. This is supposedly written primarily for laymen and lacks the scientific approach for physicians.

G.K.S.

**RESPIRATORY DISEASES AND ALLERGY.** New Method of Approach. By Joseph S. Smul, M.D. author of Digestive Diseases and Food Allergy, fellow National Gastro-Enterological Association; Member N.Y. Academy of Sciences; formerly Vice President, Manhattan Roentgen Ray Society; Association of Gastro-Enterologists, Beth David Hospital; Clinical Assistant Physician, Beth Israel Hospital. 58 pages. New York: Medical Library Co., —. Price \$2.75.

This is a very short book, consisting of only fifty-seven pages of printing. It is divided into three sections.

Section I deals with "a new method of approach" to many respiratory diseases. Included are such conditions as neurosis of the respiratory tract, hay fever, vaso-motor rhinitis, bronchiectasis, and many others. These, he groups together under the term respirallergy.

Section II deals with infectious diseases of the respiratory system. Nothing new has been added to current concepts.

Section III, of only two pages, deals inadequately with the very popular lay and medical topic: Neoplastic Diseases.

The index is well done.

It is the avowed purpose of the author to reduce confusion on the subject of respiratory diseases. To this reviewer, he has only added to the existing confusion.

L.P.S.

**MANAGING YOUR CORONARY.** By Dr. William A. Brams. Illustrations by Hertha Furth. Philadelphia and New York: J. B. Lippincott Company, 1953. Price \$2.95.

Here is a book that can be recommended for reading by the patient who has suffered a coronary attack, setting forth in clear and easily understandable language the answers to the many queries regarding cause, mechanism, treatment, restrictions, outlook that come to the mind of both the patient and those caring for him.

The approach is an optimistic one, easy to read, authoritative and yet entertaining, with many of the do's and don'ts emphasized with clever pencil sketches. It is a light book of only 150 odd pages, well printed and easy to pick up and read at any point. Many of the topics are emphasized by interesting case anecdotes. The author is an experienced clinician and writer, thoroughly familiar with the questions of these patients.

Your patient will thank you for recommending the purchase of this inexpensive volume, not only for his own reading and guidance, but for the information of those close to him as well.

R.W.B.

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**FILMS IN PSYCHIATRY, PSYCHOLOGY AND MENTAL HEALTH.** By Adolf Nichtenhauser, M.D., Marie L. Coleman, and David S. Ruhe, M.D. Medical Audio-visual Institute of the Association of American Medical Colleges. New York: Health Education Council, 1953. Price \$6.00.

The authors state that this book is a catalogue and presentation of representative films for use in the study of subjects pertaining to psychiatry, psychology and mental health. It consists of fifty-one critical film reviews.

The body of the review consists of the content description and appraisal. There is an analysis of the purpose and objectives of the film, which includes the type of presentation, effectiveness, utilization and distribution. The purpose of the book is to facilitate the selection of films and improve their application.

For those interested in these subjects, who need films for teaching purposes, this will prove to be a handy and useful volume. The only apparent objection is the cost of the binding for a catalogue which may soon be out-dated.

G.K.S.

**ANTIBIOTICS.** By Robertson Pratt, Ph.D., Professor of Pharmacognosy and Plant Physiology, University of California College of Pharmacy; Consultant on Antibiotics and Jean Dufrenoy, D. Sci. (Paris) Research Associate in Antibiotics, University of California College of Pharmacy. Second edition, Philadelphia, London, Montreal: J. B. Lippincott Company, 1953. Price \$7.50.

The rapidly expanding field of the study of antibiotics and their application is fraught with a voluminous technical literature of many thousands of papers dealing with various aspects of the subject.

It is the avowed purpose of this work, now in its second edition, to extract from this literature "the facts and principles of fundamental and permanent value relating to antibiotics" and to interpret and modify these fundamentals in the light of the newer discoveries.

To this end, some 350 pages and seventeen chapters have been devoted to exposition of fundamental concepts: industrial production, screening and assaying methods: aspects of application taking each of the antibiotics separately and then in mixed therapy, as relates to medical practice, then in dental and oral surgery, and in agriculture, and finally a section of dealing with the role of antibiotics in modifying biologic and social systems. Tables of suggestive reading of the more comprehensive literature are included at the end of each chapter.

This is not only a book for the average physician's shelf, but would find a useful niche in the average medical and hospital library.

R.W.B.

**INTRODUCTION TO PHYSIOLOGICAL AND PATHOLOGICAL CHEMISTRY.** By L. Earle Arnow, Ph.G., B.S., Ph.D., M.D., Vice President and Director of Research, Sharp & Dohme Division of Merck & Co., Inc., West Point, Pennsylvania; Professor of Chemistry, Bryn Mawr College Summer School of Nursing, Bryn Mawr, Pennsylvania, 1941-1943, 1945; formerly Assistant Professor of Physiological

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Chemistry, University of Minnesota Medical School, and Lecturer in Physiological Chemistry to Students Enrolled in the University of Minnesota, School of Nursing, Minneapolis. Revised with the Assistance of Marie C. D'Andrea, R.N., B.S., in Nursing Education, Educational Director, School of Nursing, St. Vincent's Hospital, Indianapolis. Fourth edition. St. Louis: The C. V. Mosby Company, 1953. Price \$3.75.

This book and its ancillary text, which is devoted to correlated laboratory experiments, reflect the current thought in the teaching of medical biochemistry for student nurses. It minimizes the chemical structural changes, so obtruse to the embryo nurse with a questionable high school background in the subject, and emphasizes the newer trends, examples being, nuclear physics, endocrinopathies, and various vitamin deficiencies. Particularly good chapters are the ones devoted to lipids and metabolism; and it is interesting that recent discoveries, such as the fluorophosphates, are taken up under a small section on chemical warfare. The laboratory manual which accompanies it is good and the line drawings are fair, but it probably should be more fully illustrated.

A.A.H.

**DIABETIC CARE IN PICTURES.** Simplified Statements with Illustrations Prepared for the Use of the Patient. By Helen Rosenthal, B.S., Former Chief, Frances Stern Food Clinic, The Boston Dispensary; Former Assistant in Medicine, Tufts College Medical School, and Joseph Rosenthal, M.D., Physician-in-charge, Diabetes Clinic, The Boston Dispensary; Assistant Professor of Medicine, Tufts College Medical

School; Associate Staff, Joseph H. Pratt Diagnostic Hospital. (All Units of the New England Medical Center). 128 original illustrations (including 7 in color). Prepared under the direction of the authors. Second edition. Philadelphia, London, Montreal: J. B. Lippincott Company, Price \$3.00.

Written primarily for the layman who has diabetes, this book is an extremely well-presented guide. It tells of the disease and gives the theories of treatment. An unusual feature is presented in the clear and numerous pictures of the foods, the amounts, and diagrams showing selections. There is a chapter on substitutions which may be made, and these are also fully illustrated. Diet tables and caloric values are given, with a standard diet which the doctor must vary for different persons. We consider this one of the best books for the purpose we have seen.

### SEXUAL BEHAVIOR IN THE HUMAN FEMALE.

By Alfred C. Kinsey, Wardell B. Pomeroy, Clyde E. Martin, Paul H. Gebhard, Research Associates; and others on the Staff of the Institute for Sex Research, Indiana University. Philadelphia—London: W. B. Saunders Company, 1953. Price \$8.00

Some five years ago, the undersigned reviewed "Sexual Behavior in the Human Male" and among other comments stated that this was chiefly a reference book, whose chief value was to psychiatrists, urologists, gynecologists, and medical social workers. A review of the present book not only confirms this opinion of the first, but places the second volume in the same category.

The format of Parts I and II of the book closely

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resemble the first book. Data are given as to incidence and frequency of various types of sexual activity with extensive tables. These are broken down, and an attempt is made to show how such factors as age, religious training, social background and decade of birth, influence women's sexual activity. Moral, legal and social aspects are discussed with some asperity. The authors theorize a good deal, but in drawing their conclusions leave out such all-important factors as love, motherhood and human emotions.

Part III compares the male and female anatomically, physiologically, psychologically and finishes with a dissertation on hormones. To the informed physician Part III presents nothing new but is probably of value to the laity and should increase its popularity.

The book is well documented, and only time can fully determine its value.

D.K.H.

#### CORRECTION

THE JOURNAL of the Michigan State Medical Society apologizes for the error in the listing on page 96 of the January issue. The name should read E. D. Spalding, M.D.

The Ford Motor Company reports that it has sold more cars in the month of January, 1954, than in any January in its fifty years of work. Sold, not built, means there is some prosperity.

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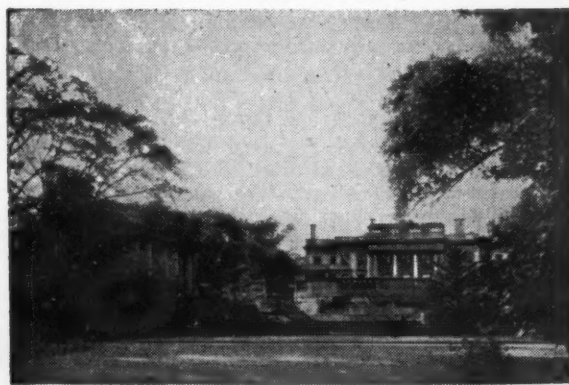
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